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THE REORGANIZATION OF SECONDARY EDUCATION IN NEW HAMPSHIRE. I

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The reorganization of secondary education in New Hampshire has taken the form of (1) a readjustment in the content of the program of studies and (2) a changed conception of the teaching process. This reorganization is based upon the following facts and principles:

a) Of all the children who graduate from the elementary schools in the state 87.4 per cent enter the secondary schools and of these 55 per cent complete the course. The number entering the secondary school is rapidly increasing, and thus the necessity of providing a program of studies adapted to the needs of the masses of society is forced upon the high schools.

b) The high school must become in a real sense the people's school and provide educational opportunities for all the children of all the people adequate to their needs. To this end the program of studies must be in part built up and organized around the industries and activities which predominate in the community in which the school is located.

c) In New Hampshire the industries, chiefly agriculture and manufacturing, are of such a character that there is a demand for curricula in mechanic arts, textile arts, agriculture, domestic arts, and commerce.

d) The secondary school should not seek a high degree of specialization before about the age of seventeen. The physical and mental organism previous to this age is such that specialization is likely to produce arrested development. The aim should be the education of the individual and not narrow specific training, but such industries and activities as relate to the future life-work to which the natural aptitudes and inclinations of the individual point may be taken into the school and used as educative material.

e) Vocational education and liberal education must be given side by side in the same school. The education of every pupil must consist of both liberal and vocational elements. Every high school should have a liberal arts curriculum and one or more vocational curricula.

f) The chief end of education in a large sense is adaptability.

Upon the basis of these principles the reorganization of secondary education is going forward in New Hampshire. There are ninety secondary schools on the approved list of the department of public instruction. Of these, five now have complete curricula, four years in length, in mechanic arts, fifteen in agriculture, twenty in domestic arts, and thirty in commerce. One-half of all the secondary schools in the state have one or more of the industrial curricula. Nine schools have three; seven have two; twenty-nine have one. Every high school in the state with one exception has a liberal-arts curriculum. This high school has just been established this year in an agricultural community, has both domestic arts and agriculture, and will add liberal arts next year. In these curricula the pupil devotes about one-fourth of his time to vocational studies and about three-fourths to work which for him contributes to liberal education, in the belief that only so can we get the truly educated man. The industrial courses are all taught by teachers with special training for their special lines of work, such as graduation from an agricultural college for a high-school instructor in agriculture.

It is believed that one of the first essentials to successful school work of any kind is a well-organized course of study which shall be followed by the teaching force of the school, and an attempt has been made to develop such a course as the basis of the industrial work as well as for the other work.

It is the purpose of this article to describe the work of various schools whose programs are typical of what is being done in the state. Development is yet by no means complete; both organization and pedagogy are in a formative stage and the schools are far from a permanent basis.

I. CURRICULUM IN AGRICULTURE

The curriculum in agriculture¹ which has been adopted by fifteen schools includes, in the first year, agronomy, farm carpentry, English, and arithmetic. The second-year studies are English, practical mathematics,² agronomy (completed), animal husbandry and dairying, and farm blacksmithing. The pupils of the third year take English, physics, animal husbandry and dairying (completed), horticulture, road-building, and forestry. The studies for the Senior year are English, American constitutional history, rural economy and farm management, geology, and physiography.

The work in agronomy begins with the study of soils, in the fall of the first year, and the class studies somewhat comprehensively the formation of soils, their classification, functions, physical properties, chemical properties, plant foods in the soil, and the effects of tillage upon soils. After the work on soils is completed, a study is made of the elementary principles of plant life, in the winter of the first year. This is applied botany and covers such topics as seeds, roots, the stem, leaves, the flower, and assimilation. The nature of plant food, its availability, the process of conversion into plant substance, and the different classes of foods are utilized as topics to give a broad view of the whole field of the subject of assimilation. During the winter term a study is made of field crops, with emphasis upon classification, the study of important

¹ This section and the following section on domestic arts are based on the *New Hampshire Standard Program of Study for Secondary Schools*, 1912 edition, which all the secondary schools use as the basis of their work; on the writer's experience for four years in supervising a school while it was undergoing reorganization; on his observations as inspector of high schools; on the reports of work of the schools, which are submitted annually to the department; and on the various New Hampshire state school reports.

² This is the name given to a course which includes (1) the algebra of the equation, (2) so much of geometry as relates to practical measurements, and (3) the elementary principles of surveying.

field crops, fertility of the soil, insects and blights and other enemies, and seed selection. In the early spring of this year the class devotes its attention to fertilizers and this work centers around the kinds, relative values, and composition of green manures, use, varieties, and value of barnyard manure, chemical fertilizers, complete fertilizers, indirect fertilizers, the mixing of fertilizers, methods of application, fertilizer laws and guaranties. For field and laboratory exercises in this part of the course the fixation of plant food by soil is noted, soils are tested for acidity, the loss by leaching of a given quantity of manure is ascertained, the effect of nitrogen, phosphoric acid, and potash on color and growth of plants is determined and described. In connection with the planting which is done in the spring a brief review is taken of the properties of soils and plant reproduction in general, with a further consideration of methods of propagation, preparation of seed bed, depth of planting various seeds, different methods employed with principles involved, and planting-time for various crops. As many different kinds of plowing and harrowing as possible are observed and described. The effects of good and poor drainage are noted with a comparison of deep and shallow draining. Cultivation is an important topic for instruction and is considered in connection with the crops which the student raises. In most of the schools crops are planted and cultivated at home during vacation, in addition to the school garden. The study of agronomy extends through the first year and into the fall of the second in order that the topic of harvesting may be included in the course. In the fall, in connection with the harvesting, the times for harvesting various crops, the principles which determine the time of harvest, methods of harvesting, curing, storing, and marketing receive due attention in class. At the close of the course in agronomy an important topic for consideration is the selection of seed, including a study of the time for selection, characteristics of good seed, plant-breeding, and the storage of seed.

In this course in agronomy about sixty field and laboratory exercises are carried out by pupils and teacher. A few are cited to show the nature of this work: (1) determination of effect of water on soil temperature; (2) germination tests for corn and at least six

other crops, seeds selected to be used in spring planting; (3) practical work in preparing a piece of ground for crop either at home or at school. Each student carries on one or more extensive projects in connection with the course. This is considered one of the most important parts of the work. It is held, however, that the best work is obtained only when the class as a whole works along the lines of a systematically planned course of study and carries on project work in connection with it.

The programs of the secondary schools which have introduced agriculture provide for two years of farm mechanics, so called, which consists of a year of woodworking and farm carpentry in the first year and a year of forging and farm blacksmithing in the second year. The boys have daily work at the bench and forge throughout the two years and make useful articles of wood and iron. They learn how to manage the fire, to bend, shape, and weld both iron and steel. Typical articles which they make are chain links, irons for sleds and wagons, whiffle-tree irons, wagon bodies, hot-bed sashes, and screen doors. The boys not only learn to make things of wood and iron but they acquire something of the skill of the carpenter and the blacksmith and learn enough of the structure and construction of farm buildings, implements, and machinery to enable them to make buildings for themselves and to repair machinery and tools.

In the second year of the agricultural curriculum animal husbandry and dairying are studied. This course begins with a brief study of a few of the main principles of elementary zoölogy which brings out the underlying facts and principles of animal life. This includes cells and their different forms and purposes, essential organs found in all the higher forms, respiration, circulation, digestion, nutrition, sense organs, the nervous system, and reproduction. The principle of heredity is explained as well as the evolutionary process, the principle of natural selection, and the phenomena of parasitism. Following the study of elementary zoölogy a study is made of types and breeds of the common domestic animals of the farm. Breeding is made a special subject of study and the topics to which attention is given are: aims in breeding, heredity, variation, atavism, prepotency, fecundity, line-breeding,

cross-breeding, pedigree, and the reading and writing of pedigrees. Breeding as practiced by local farmers is studied for results. Feeds and feeding are regarded as very important, and a comprehensive survey of this field is given by studying the relation between the plant and animal world, digestion and assimilation, classification of foods, rations, including selecting and compounding and figuring cost. Practice is given in determining amounts of nutrients in quantities of feeds. Samples of all cattle feeds in the locality are collected and studied. Prices of different feeds are obtained and the amounts of nutrients which can be purchased for a given figure are computed. The cost of keeping different animals for a year at current prices is determined.

Dairying is studied somewhat intensively and the main topics are: milk composition and secretion and properties; the Babcock test with extended exercises in testing different cows and herds; the lactometer and its use; conditions essential to the production of good milk; care and treatment of milk; butter- and cheese-making. A great deal of laboratory work is given in connection with this work. Nearly all schools have adequate dairy laboratories for this purpose.

Most of the schools have a good course in poultry raising which is deemed very important. The place of birds in the economy of nature and of man is noted. A review is taken of the general principles of breeds, breeding, and feeding as previously studied, and these topics are specifically related to poultry. The study of embryology, egg production, incubation, care of young, the construction and needs of the poultry-house, and insects and diseases gives the pupil a broad view of this subject. This field is particularly fertile for laboratory work and a good deal of it is done. Specimens of as many breeds as possible are examined and described. A good many exercises are given in figuring poultry rations. Local poultrymen are visited whenever possible and their practices observed. Eggs taken from under a sitting hen at various stages afford a means of studying embryological growth.

The work in horticulture in the third year is devoted to three large fields of study: (1) vegetable-growing; (2) fruit-growing; and (3) economic insects.

The study of vegetable-growing begins with a review of plant structure, germination, plant physiology, pollination, and reproduction, which were studied in agronomy. The elementary principles of soil physics and the chemistry of plant life are studied, after which the pupils give attention to garden soils and fertilizers, garden tools, the construction of hot beds and cold frames, seed selection, and the study of typical vegetable crops. Botanical relationships and characteristics are studied. The preparation of the seed bed and soil and fertilizer requirements are considered important topics. A large group of laboratory exercises and projects is made use of in this course. In studying fruit-growing the students study such topics as soils adapted to fruit-growing, climatic conditions, tillage and fertilizers, classes and varieties of fruits, selecting of stock and planting, diseases and insect enemies, and harvesting. For project work each pupil takes an old tree or vine to get into good bearing condition. The study of economic insects leads to a knowledge of the relation of insects to higher orders, relation to plant life, the common orders, the essential facts of insect structure, a typical life-history, beneficial effects, injurious insects, and distribution and control. Numerous laboratory exercises here as elsewhere are carried out.

Road-building in the third year includes a study and comparison of the various kinds of roads such as dirt, gravel, macadam, and telford. The essentials of a good road, grades, solidity, and water-shedding characteristics are considered. Road material and principles of construction receive attention. Field work along the line of observation of construction of state highways in the vicinity is an important part of the course.

Under the head of forestry a study is made of New Hampshire forest types, life-history, associates, and enemies of characteristic trees in each type. Some of the main topics which form the basis of the instruction are forest seeding and planting, management of the farm forest and government forests, conservative lumbering, relation to stream flow, and general rural conditions. Practical field observation and lectures by experienced foresters and lumbermen are planned as a part of this course.

The Senior year in agriculture is devoted to (1) rural economy and (2) farm management.

In connection with rural economy, farm accounting, book-keeping, and business methods receive a good deal of emphasis and the special forms of bookkeeping needed by the farmer are taught. The pupils are taught to keep debit and credit accounts for the household, dairy, poultry, the various fields, and live stock. The importance of keeping debit and credit accounts with each productive animal is pointed out. Capital, labor, production, and marketing are studied in a thoroughgoing way.

Farm management is considered during the last part of the Senior year. Crops and methods of cropping are studied systematically; the purpose of drainage, kinds of drains, and cost are taken up in a concrete way. Water supply, sewer location, and plumbing and the essential features of sanitation offer an opportunity for further study. The principles of construction, materials, and location of farm buildings are excellent topics for class study and laboratory work. Many different kinds of farm machinery are examined and studied. The principles of law which concern the daily life of the farmer are touched upon.

The aim of this course, as of the other industrial courses, is educational more than vocational. The purpose is more largely to produce educated men than specific skill in farming, although much of the latter will follow.

II. CURRICULUM IN DOMESTIC ARTS

The curriculum in domestic arts which twenty schools have adopted follows the lines laid down in the following pages. The work of the first year is English, a foreign language, music and art, elementary cooking, dressmaking from the design standpoint, and embroidery. English, foreign language, music, and art are continued in the second year with the addition of household sanitation and hygiene and household mechanical appliances. The third year has for its studies English, a foreign language, music and art, advanced physiology and hygiene, and the elements of nursing. In the fourth year the girls study English, a foreign language, music and art, cooking from the analytical point of view, household economics, household design and decoration, and American constitutional history.

The first work which is taken up in domestic arts is elementary cooking and in this are learned the principles and management of the various cooking appliances such as coal, wood, gas, gasoline, and kerosene ranges, fireless cookers, and electric heaters. The principles, use, and care of the various kitchen appliances, hot water, refrigerator, utensils, cupboards, and pantry are used as material for class study. In connection with serving, the care of the dining-room, the table and appurtenances, and the decoration of the room are taught. Menus are designed for various needs and occasions. The girls in this course make a special study of food-stuffs—the various cuts of meat, fish, eggs, milk, butter and cheese, vegetables, cereals, and fruits. A large amount of practice in cooking simple articles of diet is given, including the cooking of vegetables, meats, fish, soups, bread and cake, pastry, and preserves. Many projects in the form of dinners and lunches are available here. This field is especially rich in opportunities for mathematical computation, as in figuring the cost of the menu for a given dinner.

If sewing has been taught in the elementary schools, as is now quite common, the work in the first year of the high school is dressmaking and millinery. This course covers such lines of work as machine sewing, drafting with use of pattern, fitting and hanging of garments, designing and drafting of patterns, study of textiles, hygiene in relation to wearing apparel, suitability of apparel in relation to use and income, line and color adaptations, and computation of costs. The projects carried out here are numerous and range from a simple work-bag to the designing and trimming of a spring hat and the making of a summer dress.

The course in household mechanical appliances in the second year puts the emphasis on the scientific principles involved in a large number of household appliances. There is hardly a mechanical appliance used in the home which does not illustrate some scientific principle, and this course is of the nature of applied physics. The value of this for girls is obvious. They see the practical application of the principles which they study in those things with which they come in contact in their daily lives. The educational value of work of this kind is greater than in the case of a study of those

things which are entirely remote from their everyday experiences. The principles involved in the various heating appliances first receive attention. A few of the topics will indicate the trend and content of the course: the nature of combustion, the chemical principle of oxidation, the chemical nature of fuels, the elementary principles of heat, the cooking-range, electric heating, principles underlying heating and ventilating the house, construction and principles of the hot-air furnace, construction and principles of hot-water and steam heating-systems for dwellings, study of detailed scheme of plumbing of typical residence, the elementary principles of hydraulics, the water-piping of a residence, elementary principles of electricity and their application to electric lighting, electric heating, and the electric meter, gas lighting. Power in the household is a special topic for consideration and introduces a brief survey of elementary mechanics, the water motor, and the electric motor. The ice-cream freezer and the refrigerator illustrate the principle of latent heat. A course of this kind will eventually replace the formal, pure-science course in physics for girls who are not going to college. In such a course as this the educational value aspect is clearly evident. It is believed that this is one of the most valuable fields of study in the entire domestic-arts course.

The last half of the second year in the domestic-arts curriculum is devoted to household sanitation and hygiene. This is another of the very valuable courses which the girls take. Those who take this course, by their increased intelligence along the line of the proper sanitation and hygiene of the home, have a powerful defense against disease, a large part of which is due to lack of intelligence along hygienic and sanitary lines. The field which this course covers embraces the germ theory of disease, the elementary principles of bacteriology; a thorough study of ventilation, the water supply, milk supply, and the proper care of milk; food supply, including adulteration, with special reference to economic and sanitary considerations; drugs and medicines, with great emphasis on the danger of drugs taken promiscuously; refuse, with attention to it as a breeding-place for bacteria; personal hygiene; study of the house and furniture from the point of view of sanita-

tion and hygiene. This last topic includes the need of light in all rooms, upholstering as a factor in household sanitation, and the use of iron, glass, and tiling in the construction of good furniture.

The third-year work in advanced physiology and hygiene needs no extended description except to say that it is strictly of the same grade as the physics or chemistry which is taught for college admission with reference to laboratory work, notebooks, and great emphasis upon the applications to personal and public hygiene.

The course in nursing deserves especial mention. It is, of course, not intended that trained nurses shall be produced in a high-school course like this. Great stress is laid upon cleanliness from a surgical point of view. A review of the elements of bacteriology in an elementary way is taken. All forms of emergencies, such as cuts, bruises, burns, fractures, dislocations, asphyxia from gas, drowning, fainting, poisoning, are studied in a practical way. The care of minor injuries is taught in a practical and elementary manner. The simple facts concerning temperature, pulse, and respiration receive attention. The nursing of children and aged people is given a good deal of emphasis. The care of the sick and cooking for the sick-room furnish an excellent opportunity to give instruction which is rational and practical for girls of secondary-school age. This course will add largely to the intelligence and efficiency of the future wife and mother.

The advanced cooking of the Senior year is taught from a very different point of view from that of the elementary cooking of the first year. In the advanced cooking and dietaries the more scientific aspects are studied. This work centers around the study of food values, the chemistry and biology of cooking, and the preparation of economical dietaries. The diet of the sick-room receives considerable attention. The various food constituents are studied from a scientific point of view. The bacteriology of foods furnishes a valuable field for study in this year. The consideration of the nutritive values of foods furnishes problems of especial interest and value to girls at this stage of their education. All of the staple foods are studied from the point of view of chemical composition, economy, place in diet, and methods of preparation. A great deal of canning and preserving is done and the whole matter is

considered from a bacteriological standpoint. A great many laboratory exercises in the form of cooking exercises are given in this course.

The second line of work in this year is called household economics. It centers around two lines of work: (1) Household accounts: household bookkeeping is of great importance for the future housewife and involves a good deal of practical mathematics of the kind which will function in after-life. The use of the check-book, the keeping of the accounts of the household, and the general money relations of the household form the basis of the work in this field. (2) Marketing: the following quotation from the last report of the department of public instruction concerning one school gives the essential feature of the work in marketing:

Each girl has been assigned an imaginary family of three, with a moderate income. Using daily market prices, furniture and clothes catalogues, and other data from real life as the basis, she has been expected to do imaginary buying and bookkeeping, under the oversight of an instructor, and to carry the family through. Doubtless the pupil would find real life very different from imaginary life, but nobody can doubt that in this way she secures an insight into the conditions under which most young housekeepers must live of incalculable value.¹

The spirit and content of the course in household design and decoration in the Senior year may be seen from the following statement of work covered which is a part of the report of work submitted to the state education office by one school:

Evolution of the house; development of the American house; house plans; study and criticism of various house plans in textbook and magazines; completion by each pupil of one of these plans and design for second-floor plan of some house; plan by each girl of first and second floors of main building; construction of the house; choice of site and style of building to suit place and purpose; consideration of cellars; plan of cellars known to pupils; principles of house decoration and furnishing; consideration of division of space, good lines, appropriateness, and harmony of color; practical experience gained by selecting furniture for a window in a furniture store; one recitation period each week in latter part of term given to discussion of minor details of house-keeping with this general question in mind: "How can we protect or add to the beauty, convenience, and comfort of our home?" To each girl was assigned some special topic.²

¹ Morrison, *New Hampshire School Report, 1911-12*, p. 230.

² *Ibid.*, pp. 230-31.

[To be continued]

PHYSICAL TRAINING WITH SPECIAL CORRECTIVE WORK AND HYGIENE (INCLUDING SEX HYGIENE) IN GIRLS' HIGH SCHOOLS¹

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Physical training in the high school holds a very important place for many reasons, of which I shall discuss three.

1. *Lack of exercise in the adolescent girl.*—In the elementary schools, the children run and play at recess time, and both before and after school. They spend much time in playing games of various sorts and get considerable exercise in this way, apart from any special gymnastics they may have in school. On leaving the grammar grades and entering the high school, the environment undergoes a change. Everything is done to impress on the girl the fact that her childhood is over and that she is now a young lady. The ways of the high school are different. For instance, there is the morning assembly, the changing of rooms and teachers for each class period; one continuous session instead of two; an indoor recess and lunch, instead of going home in the middle of the day; and there is more personal responsibility as to her conduct.

As the girl grows, her hair is put up and her skirts are lengthened, one year alone making a really remarkable change in her appearance. Even the form by which she is addressed is changed, and instead of Mary, she is *Miss Smith*. Because she is a young lady, she is not supposed to run, or jump, or shout, or play on the street, and she very soon ceases to do any of them. Something ought to and *must* take the place of the free and childish exercise which she has given up; and the gymnasium, with its exercises to command, its apparatus work, folk dances, basket-ball and hockey games, is the next legitimate form of exercise which the girl should have if she is to grow up strong and well.

¹Paper read before the High-School Conference, University of Illinois, November 21, 1913.

2. *The anemia of adolescence.*—There are many ailments attending the period of adolescence, prominent among them being anemia, or in the growing girl chlorosis. The percentage of cases in all high schools is large. There is not an actual reduction in the number of red blood cells, but there is a reduction in haemoglobin, the coloring matter, which carries the oxygen, this reduction being due to rapid growth. The treatment of such cases is good, nutritious food, plenty of sleep, a moderate amount of mental work, and some exercise.

Exercise increases the force and frequency of the heart beat and deepens the breathing, thus supplying more oxygen to the impoverished blood and purifying more blood to be carried all over the body. The increased supply of blood to the surface induces perspiration and thus rids the blood of many impurities. It uses up food, and thus creates an appetite for more food. It squeezes the lymph out of the tissues, thus carrying off impurities that become stagnated in the cells.

It is not so much over-study, as lack of fresh air and exercise, that makes boys and girls break down in the high school. If the muscles are not used, they become weak and flabby, impurities collect in the cells, the oxygen inspired fails to keep up the percentage of haemoglobin in the blood, and anemia results. In the majority of cases, moderate exercise does good, especially where nervousness is present and that is in most cases, even up to the stage of chorea. A very few cases may be debarred from work where the heart action is poor.

A regular physical examination of all pupils should be made on entering the school. This should be thorough, including the heart, lungs, eyes and ears, nose, throat, and teeth, menstrual functions, nervous condition, general condition, and an orthopedic examination for deformities. All defects should be noted, and a card sent home to the parents notifying them that such conditions need immediate correction. The ideal system is one in which such cases are followed up and the parents forced to see that defects are remedied. So far, we have been able only to advise, not to insist on correction.

Every pupil in the school should have such a physical examination once a year and all changes should be noted. Since we have improved so markedly in Philadelphia in the physical examination of pupils in the elementary schools, there has been a noticeable improvement in our Freshmen in the high school, especially as to teeth, eyes, and nose and throat conditions.

3. Rapid growth of the long bones.—The age of puberty is known as the "awkward age," and with reason. There is an actual disproportion between the limbs and the trunk. This rapid growth tends to deformity of the spine. The superincumbent weight of the body is too much for the spinal column, and there is a tendency to lean toward one side. Various deformities appear at this time of rapid growth. In school girls, they can be traced to carrying books on one arm on the hip; swinging them in a strap always on one side; the standing position at rest always being on one side; or sitting on one foot, etc. Spinal curvature, or scoliosis, results, with one low shoulder, and a high hip. If the case goes on, a compensatory curve, or a curve in the opposite direction, is formed in order to hold the body erect. This disease is entirely functional, there being no disease of the spinal column.

There is a higher percentage of cases among girls than boys. This is due to the fact that not only do boys naturally take more exercise than girls, but greater attention is paid to their physical development. Therefore there is a greater likelihood of early recognition of the deformity and consequently earlier consultation with the orthopedic surgeon.

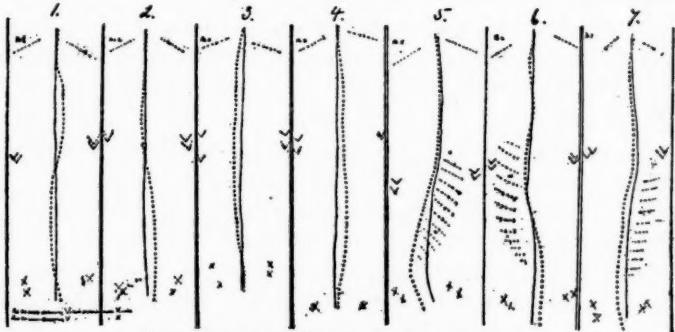
Some of the secondary results of scoliosis are pain in the back from nerve pressure; occipital headaches and neuralgias, from stasis of the circulation in the spinal canal; digestive disturbances; palpitation of the heart; capricious appetite; nervousness and various nervous symptoms, even including chorea in young children. Occasionally, a child will enjoy comparatively perfect health.

In the William Penn High School, we have been making an orthopedic examination for over one and a half years. The number of cases examined was 3,186. Those showing some orthopedic deformity were 2,019, or $63\frac{1}{3}$ per cent. By orthopedic deformity

is meant lateral curvature of the spine, which is shown by a low shoulder or a high hip, or both; round shoulders, or kyphosis; hollow-back, or lordosis; and a forward carriage of the head.

Each girl is examined separately, without removing her clothes. She takes an easy standing position, and we take the front, back, and side views. Only the worst cases are selected for special work. Their rosters are so arranged that they may take five, four, or three hours a week, according to the amount of deformity present; most of the girls take five hours, or one hour daily.

When a girl is selected for special work, she has a private examination, and removes her clothes above the waist, so that a strip



RECORDS OF LATERAL CURVATURE OF THE SPINE.

(THE DOTTED LINES SHOW THE AMOUNT OF DEFORMITY; THE STRAIGHT LINES, THE CORRECTION AFTER SPECIAL EXERCISES.)

FEBRUARY, 1912: — DEFORMITY; ✓ = POINT OF SHOULDER BLADES; X = HIPS.

JUNE, 1912: — CORRECTION; ✓ = POINT OF SHOULDER BLADES; X = HIPS.

adhesive plaster six inches wide and two feet long may be adjusted to her bare back. Then a record of the deformity is made on the plaster in blue pencil. The spinous processes are marked, also the different height of the shoulders, both above and at the lower angles of the shoulder blades. The variation in the hips is marked by a cross at the sacro-iliac joint, which always indicates any tilting of the pelvis. The plaster is then quickly removed, numbered, and placed on a page in a large record book, made especially for this purpose. It remains in the book until the end of the term, when it is removed, placed again on the girl's back and record made again in red pencil, showing the amount of correction (see illus-

tration). (For purposes of illustration, the deformity is shown in dotted lines, the correction in solid lines.)

The results of our work have been extremely encouraging, probably because we get the girls for an hour every day in the school week, and they are encouraged to continue the work at home. Every girl has her own special exercises, which she writes on a card and consults from time to time. As the classes are small, eight to twelve in a class, each girl receives individual attention from the teacher. The work is given by the regular gymnasium teachers under my own supervision.

In the one and a half years, we have had 110 pupils taking special work. Of these, all but about a dozen have been cured. Of those not cured, some were fixed types which cannot be corrected, while others were absent and did not get the work regularly. In two cases, the pupils failed because they would not do the work —they were lazy.

On going over the school records of these 110 specials, we found their general attendance was good; rather a large percentage left school without finishing. Their intellectual standing was significant, and is as follows: Good, 18; Fair, 33; Poor, 59. Whether their poor showing is due to the deformity or not is an interesting question. It is quite probably due to the secondary results of the deformity, but more statistics will have to be collected before a decision is made.

The money value of this treatment which is given freely to the public is a considerable one. A girl taking five hours weekly gets at least \$200 worth of expert treatment. For a class of forty, this makes a total of \$8,000 in one term or \$16,000 a year. This does not include the specialist's fee for two examinations for each girl, which would add from \$1,000 to \$2,000 to the yearly amount.

THE TEACHING OF PERSONAL HYGIENE AND SEX HYGIENE

The reasons for the necessity of teaching hygiene are clearly set forth by Mr. William D. Lewis, principal of the William Penn High School, in the following statement: "The last few years have witnessed a remarkable revolution against the old idea that it was the chief function of the school to impart a knowledge of many

things. The newer conception of education emphasizes the necessity of developing habits that will bring out the best possibilities of the individual, both physically and mentally. With this idea has come an intense interest in the physical welfare of the individual. So the old textbooks, with their exhaustive discussion of anatomy and physiology, are disappearing, and their place is being taken by manuals that give the young the instruction most needed to enable them to build up normal, healthy lives."

Heretofore, too much physiology and not enough hygiene has been taught in our schools. Rather than have pupils acquire a mass of knowledge concerning the circulation of the blood, the coats of the stomach, the construction of the eyeball, or the arrangement of the various parts of the brain, is it not more practical for them to know why milk is such a splendid food, what shoes are hygienic, and why; how to act in such emergencies as fainting, nose-bleed, and drowning; the germ theory of disease, and the intelligent use of disinfectants?

Because of this strong conviction, a series of talks was planned for my first-year class, which talks have since been embodied in a textbook, called *Hygiene for Girls*. Under "Personal Hygiene" are discussed such subjects as the value of exercise, proper positions in sitting and standing, baths and bathing, care of the hair and nails, suitable clothing, tight corsets, hygienic shoes, the values of various foods, the making of menus showing proper combinations, danger of fried food, ventilation and the value of fresh air, the dangers of dust, colds and their prevention, headaches, care of the eyes and ears, nervousness, fatigue, good and bad habits, etc.

Under "Community Hygiene," they learn in a simple way something about germs and their relation to disease; diseases carried by insects; tuberculosis; vaccination and antitoxins; narcotics and alcohol (viewed from the sociological standpoint), patent medicines, public work and emergencies.

One chapter in the book discusses in a simple way the reproductive organs with special hygiene of the body during menstruation. This lesson may be taught by the teacher, or she may leave the girls to read it themselves at home.

Personal and community hygiene need not necessarily be taught

by a physician. They may be taught in the departments of biology or physical training. It is best to give them in the first year in order to reach as many girls as possible.

The subject of sex hygiene, or better, eugenics, should be presented by the woman physician in the senior year. My first experience was four years ago when I gave three talks to the graduating class on puberty, reproduction, and the social evil. After the lectures, the girls were asked to write an honest opinion of them, and to state whether they thought these talks were of value, and if they would advise the continuation of them in the next succeeding classes. In order to get an unbiased opinion, the girls were asked to leave the papers unsigned. Of the 145 girls in this first class, not one spoke against the lectures, and all thought they should be continued and elaborated.

Since that time, the course has been expanded, so that it now includes a whole year or forty weeks. The first term is devoted to domestic sanitation and we discuss such questions as the home, its origin, foundation and influences, the water and food supply; heating, lighting and furnishings; ventilation; plumbing; garbage, ashes, and sewage, and their disposal; their relation to insects and disease; germs, their classification; disinfection; recognition of the common diseases of childhood; boards of health, quarantine, etc.

This brings us to the second term in which eugenics is taught. The first lessons are hints on home nursing, such as preparation of a sick-room, various kinds of diets, information about hot water bags, ice bags, taking a temperature, giving medicines, etc. These lessons prepare the way gently for a talk on puberty in the girl and boy; the reproductive organs; reproduction, considered biologically from the lower animal and plant forms up to the human being; the care of the pregnant mother; the baby, with use of a model—its clothes, with their prices, how to hold, wash, and dress it; the feeding and artificial foods, the sick baby, with a little of the common ailments of babies; venereal diseases, with their effects on the wife and children; prostitution, a little of its history, the white slave traffic, why girls enter this life and how they are often trapped into it; feeble-mindedness; and immoral tendencies

in dress, dancing, literature, the theater, art, etc., with special reference to behavior in offices, street cars, on the street, etc.

The old idea that equipment for efficiency was to keep the girl in absolute ignorance is giving way to the sane idea of preparing a girl to be a home-maker, a good wife, and a good mother. Such knowledge does not come by instinct, but by careful training. So important is this course deemed by our principal, that all girls, in all of the four courses in the school, are compelled to take this entire year's work in domestic sanitation and eugenics. The girls are quite enthusiastic over the work, and I have yet to receive one objection from a parent. On the other hand, I have received many encouraging words from parents and other relatives, and I hope to continue and broaden the courses each year.

THE VOCATIONAL INTERESTS, STUDY HABITS, AND AMUSEMENTS OF THE PUPILS IN CERTAIN HIGH SCHOOLS IN IOWA

IRVING KING
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Various studies have recently been made of different characteristics of the young people attending public high schools. One of the best is the well-known study of J. K. Van Denburg which presents various characteristics of 1,000 pupils who entered the New York high schools at the same time, with a view to discovering the sort of pupils who are eliminated. From a somewhat different point of view, V. L. Mangun recently studied the character of pupils in attendance upon the short courses provided by some of the Minnesota high schools.¹

The present writer has recently collected some data regarding Iowa high-school pupils. In part, the information is similar to Van Denburg's and in part goes farther. Moreover, it is not confined to entering classes but includes practically the entire student body of the four schools studied. No attempt, however, has been made thus far to connect this information with the subsequent records of these pupils.

The first query made by the writer was as to the occupations of the fathers of these Iowa high-school pupils. The following Table (I) presents the information obtained, together with Van Denburg's figures for the 1,000 New York high-school pupils.

The figures for these two widely separated localities present many striking similarities, e.g., in the case of trade and manufacture and artisans, and in most cases the differences which are noted may be easily explained. It is not surprising, for instance, to find the agricultural class well represented in the Iowa schools. Some of the other differences, such as those seen in the number of city and federal employees, those doing personal service, and those

¹ "A Study of the Eliminated," *Winona Normal Bulletin*, November, 1913.

in the printing trades, suggest that the distribution of men in the various vocations is slightly different in these smaller western cities from that in New York. But the fact that the children of men in professional work are found more than two and one-half times as frequently in these schools as in New York indicates that the schools in this section are even more democratic than in the East. The professional classes, quite as much as the humbler types of workers, see in the public high school a suitable place for the education of their children.

TABLE I

THE FATHERS' VOCATIONS OF 1,112 PUPILS IN THE IOWA CITY, OTTUMWA, AND DUBUQUE HIGH SCHOOLS, 1913, COMPARED WITH THOSE OF 1,000 HIGH-SCHOOL PUPILS IN NEW YORK CITY

	Iowa	New York		Iowa	New York
Agriculture.....	151	.....	Clerical.....	30	52
Trade and manufacturing.....	268	227	City and federal employees.....	40	61
Artisans.....	156	150	Personal service.....	18	41
Middlemen and office workers.....	92	106	Printing trades.....	10	35
Transportation.....	75	46	Unclassified.....	51	36
Professional.....	93	36	Blank.....	63	89
Semi-professional.....	19	36	Retired.....	17	13
			Dead.....	40	76

The high-school pupils' vocational intentions throw much interesting light upon the pupils themselves and probably have much to do, as Van Denburg found, with their persistence and success in their high-school work. The variety of occupations mentioned reveals to some extent the breadth of outlook of these high-school youths. Van Denburg found forty different types of work mentioned by boys and twenty-one by the girls. The 1,109 pupils in Iowa mention an even larger number of vocations. This may be largely due to the fact that the answers were taken from the upper-class pupils as well as from those just entering. It may also indicate a slightly wider range of outlook among the boys and girls of central parts of the country.

The following table (II) presents the data from New York and from Iowa in parallel columns for comparison. The larger number of different occupations mentioned by the Iowa children and the

smaller percentage who have no plans as to their future work are the significant points to note from this table.

TABLE II
VOCATIONAL CHOICES OF 1,109 PUPILS IN THE THREE IOWA HIGH SCHOOLS

	Iowa	New York
Different occupations chosen by all.....	71	.....
Different occupations chosen by boys.....	54	40
Different occupations chosen by girls.....	30	21
Different occupations chosen by 2 per cent or more of the boys.....	15	9
Different occupations chosen by 2 per cent or more of the girls.....	10	7
Undecided or blank, boys.....	23 per cent	41 per cent
Undecided or blank, girls.....	23 per cent	51 per cent

TABLE III
VOCATIONS CHOSEN BY FIVE OR MORE PUPILS OF EITHER SEX, IN THREE LARGER IOWA HIGH SCHOOLS

	IOWA		NEW YORK	
	Boys	Girls	Boys	Girls
Teaching.....	13	261	11	168
Engineering.....	94	.....	78	.....
Stenography and book-keeping.....	16	85	4	55
Law.....	32	.....	24	2
Farming.....	34	.....	1	.....
Nursing.....	.....	24	.....	.....
Medicine.....	30	3	7	1
Business.....	33	4	36	4
Music.....	.....	23	1	19
Dentistry.....	8	.....	2	.....
Pharmacy.....	8	.....	3	1
Salesman.....	16	.....	2	.....
Mechanic.....	8	.....	.....	.....
Army or navy.....	8	.....	3	.....
Labor.....	5	.....	.....	.....
Domestic science.....	.....	22	.....	.....
Housekeeping.....	.....	8	.....	2
Librarian.....	.....	12	.....	3
Physical training.....	1	6	1	1
Civil service.....	5	1	.....	.....
Office work.....	6	5	.....	2
Architecture.....	6	.....	7	.....
Millinery.....	.....	6	.....	2

Table III enumerates the different vocations chosen by five or more pupils of either sex with numbers of New York pupils who

also chose these vocations. Here again the general tendency is the same. Teaching stands easily first with the girls in both the East and the West, and engineering is likewise the favorite with the boys. Van Denburg accounts for the large choice of engineering in New York by the striking examples of great engineering enterprises which the boys see on every hand—the great bridges, tunnels, subways, railway terminals, and lofty steel buildings. But an even larger number of Iowa boys have an interest in engineering—boys who can at best only have read about these modern engineering wonders. Does this not indicate that

TABLE IV
DISTRIBUTION OF VOCATIONAL CHOICES IN THREE SMALL HIGH SCHOOLS
(The narrow range as compared with that of the larger schools is significant.)

	LISBON		WEST BRANCH		GRANITE FALLS, MINN.		TOTALS	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Teacher.....	1	18	.....	12	1	39	2	69
Farmer.....	6	.....	14	.....	15	.....	35	0
Engineer.....	4	.....	3	.....	10	.....	15	0
Nurse.....	0	2	.....	.....	.....	4	0	6
Merchant.....	1	.....	.....	.....	2	.....	3	0
Mechanic.....	3	.....	.....	.....	1	.....	4	0
Bookkeeper.....	.....	.....	1	.....	.....	5	1	5
Stenographer.....	.....	.....	.....	1	.....	4	0	5
Scattering.....	2	1	1	4	9	11	12	16
Undecided.....	2	13	2	18	9	5	22	36
Total.....	.....	.....	.....	.....	.....	.....	96	137

there is something inherently attractive to boy-nature in the engineering pursuits? Among the vocations mentioned by considerable numbers of Iowa girls but apparently not at all by New York girls are nursing and domestic science. Law and business are apparently about equally attractive to both groups of boys; but the Iowa boys far exceed those of New York in their interest in medicine, and naturally also in farming.

Table V shows how much alike the choices of the two groups are; for only three vocations are mentioned by more than 2 per cent of the New York children which are *not also* chosen by more than 2 per cent of the Iowa pupils.

Van Denburg found a close relationship between the high-school student's estimate of the *value* of high-school work and the length of his stay in high school. For instance, only 47 per cent of those 1,000 children stated that they regarded a high-school education as necessary for their purposes in life; the rest answered that it was

TABLE V
VOCATIONS MENTIONED BY 2 PER CENT OR MORE NEW YORK HIGH-SCHOOL STUDENTS, BUT MENTIONED BY LESS THAN 2 PER CENT IOWA HIGH-SCHOOL STUDENTS

	Boys	Girls
Electrician.....	36	.....
Designer.....	.....	6
Dressmaker.....	.....	7

not necessary or that they were uncertain as to its value. In following the high-school histories of these pupils Van Denburg found that the expectancy of staying in and completing the course was much higher with those answering "yes" to both questions than with those answering "no," or "undecided."

The following are the exact figures:

50 per cent of the boys who answer "yes" stay two years.

50 per cent of the girls who answer "yes" stay three years.

50 per cent of the boys and girls who answer "no" do not stay one year.

TABLE VI
IOWA PUPILS' ESTIMATES OF THE VALUE OF HIGH-SCHOOL AND COLLEGE WORK

	Yes	No	Uncertain	Totals	Percentage Yes
Are four years in high school necessary for your purpose? Boys	354	93	87	534	66
Are four years in high school necessary for your purpose? Girls	336	113	84	533	63
Do you intend to spend four years in high school? Boys	470	44	34	548	74
Do you intend to spend four years in high school? Girls	534	47	33	614	87
Is a college education necessary for your purpose? Boys	337	113	87	535	63
Is a college education necessary for your purpose? Girls	297	200	114	617	48

In Table VII are presented some figures as to studies in which the students of four large Iowa high schools were most interested, least interested, and the ones in which failures were reported. It was thought in gathering this information that there might be some relation between a student's school interests, his vocational

TABLE VII*
STUDIES IN WHICH THE HIGH-SCHOOL STUDENTS OF IOWA CITY, DUBUQUE,
BURLINGTON, AND OTTUMWA ARE:

		Most Interested	Least Interested	Failures Reported
English.....	{Boys Girls	179 321	146 118	54 44
Latin.....	{Boys Girls	64 154	106 86	87 53
German.....	{Boys Girls	69 192	65 78	79 50
Mathematics.....	{Boys Girls	286 237	120 296	143 148
History.....	{Boys Girls	158 153	88 160	48 53
Physical science.....	{Boys Girls	137 89	26 46	11 17
Biology.....	{Boys Girls	31 38	19 13	4 2
Commercial.....	{Boys Girls	70 63	10 4	9 6
Manual training.....	{Boys Girls	55 2	5 6	1.....
Domestic science	Girls	64	10	4

*In the preceding tables data are given from three schools. In this and the following tables four schools are reported.

preference, and perhaps even his intention to remain in high school for the entire course. We were not able to detect any such relationships from the data as they came to us but the figures by themselves are of some significance.

The difference between boys and girls in regard to English, Latin, and German is especially interesting. Several questions

arise in one's mind. For example: Is the girls' preference for these subjects due to the fact that the intrinsic quality of the subjects makes more of an appeal to the girl-mind than to the boy-mind, or does the fact that these subjects are taught by women mean that they tend to be presented in ways better suited to arouse the girls' interest than the boys'? Both of these factors probably have their influence. On the other hand, boys surpass girls in their interest in mathematics, history, and physical sciences, judged both by positive preference and by the much smaller numbers of boys who select these subjects as those in which they are least interested. From the small numbers of each sex who mention commercial subjects, manual training, and domestic science as most interesting we should judge either that they are not largely elected or are not taught, thus far, so as to make a very definite appeal to children of high-school age. Whether one or both of these conditions be true, it indicates that these so-called practical and semi-vocational subjects do not thus far awaken the interest in the pupils of these cities that the older and better standardized subjects are able to do.

As to failures, the various mathematical subjects easily outrank all others. This may be due to less efficient teaching, to too great difficulty in the subjects, or to too little willingness of large numbers of high-school pupils to overcome the difficulties that they present.

In connection with these figures regarding failures which are based solely upon the pupils' own reports and which therefore are subject to more or less error (probably in most cases in the pupils' favor), the following data are of interest. It is a comparison of the failures and successes by subjects from the official records of over 1,000 pupils in 23 successive classes in the Iowa City High School.

From Table VIII, covering an eleven-year period for a single high school, it appears from the failures recorded that algebra ranks first in difficulty, Latin is second, and geometry a close third. While no percentages can be computed from Table VIII for exact comparison with the data in Table VII, there is a striking similarity in the relative difficulty of subjects as there presented.

The questionnaire which yielded the data given above for the four Iowa high schools also asked for a report from each student as to the approximate number of hours spent in study outside of school hours. Practically all high-school officials agree in thinking that some outside study is both desirable and necessary, unless there is special opportunity provided by the school for supervised study during school hours, and this notwithstanding the arguments recently presented in certain popular magazines against home study.

TABLE VIII

THE NUMBER OF PASSING GRADES MADE IN VARIOUS SUBJECTS BY 1,042 PUPILS
IN 23 SUCCESSIVE CLASSES IN THE IOWA CITY HIGH SCHOOL

	Passing Grades	Failures	Percentage of Failures
English including literature.....	4,541	544	11
Algebra.....	2,140	498	19
Geometry.....	1,506	253	14
History and civics.....	3,163	397	11
Latin.....	2,693	468	15
German.....	1,271	87	6
Commercial work.....	644	45	8
Physical sciences.....	1,189	111	9
Biological sciences.....	1,013	82	8
Manual training.....	678	32	5

These pupils were asked to check the following estimates which most nearly represented the amount of time spent per week in home study:

0-4, 5-8, 9-12, 13-16, 17-20.

Table IX gives the answers of 1,431 pupils of four schools. Here, as in the answers to the previous questions, there is doubtless more or less inaccuracy, with the probabilities lying on the side of an over- rather than an underestimate. The correspondence in the times given by the students of the different schools is very striking and indicates that in spite of errors in individual cases these estimates represent fairly the distribution of Iowa high-school pupils as to the amount of time spent in home study. Five to eight hours of home study per week is the most common report. Whether this is enough time for the average pupil, each high-school principal

TABLE IX
HOURS OF STUDY PER WEEK OUTSIDE OF SCHOOL (FOUR IOWA HIGH SCHOOLS)

	0-4		5-8		9-12		13-16		17-20	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Dubuque..	13	18	123	100	27	48	10	14	2	3
Iowa City..	21	20	91	115	50	69	11	30	8	3
Ottumwa..	8	13	96	118	42	88	11	27	1	6
Burlington.	17	20	51	77	23	32	4	15	2	4
Totals..	59	71	361	410	142	237	36	86	13	16

must judge for himself. It is, at any rate, of some importance in dealing with the high-school situation to know the actual distribution of our pupils in this matter of home study. It was thought that there might be some relation between success in studies and amount of home study. The reports of 244 Burlington pupils in the tenth, eleventh, and twelfth grades were studied with this question in mind, but there was no clear relationship apparent from the data furnished by the students. The results were as follows:

TABLE X

Hours per Week in Home Study	Percentage Failing One or More Times	Percentage Failing Two or More Times
0-4.....	56	33
5-8.....	45	29
9-12.....	54	36
13-16.....	17	17
17-20.....	0	0

While there is no clear relationship in terms of mere failures, there is, no doubt, a relationship in terms of the quality of work done if we but had its measure in actual grades. This is a point upon which we must for the present defer a definite answer.

The pupils in these four Iowa schools reported themselves as spending entire evenings per week at home, as follows:

It will be seen from this table that the boys most commonly report three and four evenings out of the week at home and the girls four and five. Not many of us will feel that this report is altogether auspicious for the good of the high-school pupils. When

the number of evenings per week spent at home falls below five on the average, one cannot help but feel that home life and home influences are playing too little part in the lives of these adolescents. Fifty-nine per cent spend four evenings or less at home.

TABLE XI

ENTIRE EVENINGS PER WEEK SPENT AT HOME AS REPORTED BY PUPILS OF FOUR
LARGE IOWA HIGH SCHOOLS

	EVENINGS										TOTAL				
	7		6		5		4		3		2		1		
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys
Iowa City...	12	34	17	24	39	53	30	50	43	25	23	11	6	1	11
Dubuque....	6	19	13	18	28	42	40	59	43	30	27	6	10	1	0
Burlington...	5	10	6	14	31	45	35	53	19	12	15	2	3	0	7
Ottumwa....	7	14	9	36	24	78	38	94	40	37	19	7	4	1	9
Totals..	30	77	45	92	122	218	143	256	145	104	84	26	23	3	31
Percentages..	8	9		24		28		18		8		2		3	.....

SIMILAR REPORT FROM TWO SMALL SCHOOLS

	EVENINGS										TOTAL				
	7		6		5		4		3		2		1		
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys
West Branch....	1	5	8	8	8	2	7	4	4	1	...	...	3	5	23
Lisbon.....	4	3	2	5	4	7	2	5	1	7	3	5	1	4	35
	4	4	7	13	12	15	4	12	5	11	4	5	1	7	44
															68

In order to see what relation might exist between success in school and evenings at home the answers of the entire 1,400 pupils were re-examined and the number of failures reported by them was distributed according to the entire evenings per week which they report themselves as spending at home. Tables XII and XIII give the results of this inquiry.

Pupils reported as spending 4-7 entire evenings per week at home average 55 failures per hundred pupils.

Pupils reported as spending 0-3 evenings per week at home average 135 failures per hundred pupils.

TABLE XII

CORRELATION BETWEEN NUMBER OF PUPILS FAILING ONE OR MORE TIMES IN STUDIES AND ENTIRE EVENINGS SPENT AT HOME, PER WEEK

	EVENINGS								
	7	6	5	4	3	2	1	0	
Iowa City.....	{ No. cases.....	46	42	86	80	68	34	7	15
	Percentage failing	14	36	27	28	50	64	70	74
Dubuque.....	{ No. cases.....	25	39	81	99	73	35	11	7
	Percentage failing	12	20	30	34	50	46	55	86
Burlington.....	{ No. cases.....	15	28	66	78	31	17	3	6
	Percentage failing	47	20	47	48	58	65	100	67
Ottumwa.....	{ No. cases.....	21	46	102	132	77	26	5	9
	Percentage failing	48	37	36	47	51	51	60	45

TABLE XIII

DISTRIBUTION OF NUMBER OF FAILURES PER HUNDRED PUPILS ACCORDING TO EVENINGS AT HOME

	ENTIRE EVENINGS AT HOME								
	7	6	5	4	3	2	1	0	
No. failures per 100 pupils—									
Iowa City.....	20	48	53	59	89	86	114	153	
Dubuque.....	24	23	51	55	100	117	72	157	
Burlington.....	80	31	98	105	180	206	300	166	
Ottumwa.....	76	69	51	93	100	104	120	90	
Averages.....	50	43	58	78	116	128	152	145	

A recent study of 380 delinquent pupils in the Minneapolis high schools¹ revealed the fact that 46 per cent of them confessed that they were "out" the larger share of evenings in a week. No data were there collected as to the home-staying habits of the pupils whose school work was up to grade, but in the light of the returns

¹ W. W. Hobbs, "An Inquiry into the Cause of Student Delinquency in the Minneapolis High Schools," *School Review*, November, 1912.

from the Iowa high schools it is fair to assume that there was a direct relation between the delinquency of those Minneapolis pupils and the little time they spent at home.

The preceding information regarding these 1,400 pupils in the four Iowa high schools relates more or less directly to their school work and school interests. It is interesting to know, in connection with this, something of what these pupils are doing aside from their school work, whether they help at home, whether they earn money or not, and the extent of their participation in certain forms of amusement.

The following table (XIV) gives the answers to the question, "Do you have work at home?" The data are given separately for each city in order to show how far there is any uniformity in this particular.

TABLE XIV
DO YOU HAVE WORK AT HOME?

	Yes		No	
	Boys	Girls	Boys	Girls
Iowa City.....	156	197	33	32
Dubuque.....	140	143	24	34
Burlington.....	87	142	10	20
Ottumwa.....	154	242	7	16
	537	724	74	102
	Yes, 88	per cent	No, 12	per cent
Grand Total.....				1,426

The fact that the girls slightly exceed the boys in helping with home work is natural in view of the sort of work that is usually available for children in city homes. It is encouraging for those who believe that children should learn to participate in home duties to note the large percentage of these pupils who report such participation. In the above-mentioned study of 380 delinquent pupils in the Minneapolis high schools it was found that the number who reported home work of any kind was much less than this. Whether, however, there is any general connection between lack of home work and delinquency is a subject demanding further investigation before it can be definitely answered. It is natural

to suppose that a complete absence of all responsibility at home might lead to an excess of outside activities which would interfere materially with school success. The only data from which we can infer school standing of these Iowa pupils are the number of semester failures reported by each pupil, and there was no apparent relation between these failures and home work or lack of it.

The distribution of time spent at home work by these pupils was given by them as follows:

TABLE XV
TIME PER DAY SPENT BY IOWA HIGH-SCHOOL PUPILS AT HOME WORK

0		LESS THAN 1 HOUR		1-2 HOURS		3-4 HOURS		5-6 HOURS	
Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
74	102	51	69	263	343	67	113	46	54

The question next arises, "Do any of these pupils, who do not work at home, have work of some sort outside of home?" Some of these do, but it happens quite as frequently that they do no work of any kind, while those who report home work also quite as often report that they work outside also. In answer to the question, "Do you earn money outside of school?" the following data were secured: Yes: boys, 426; girls, 192; No: boys, 205; girls, 665; 68 per cent of the boys and 22 per cent of the girls reporting that they earn money in one way or another outside of school.

It is of some interest to know the kinds of work mentioned by these pupils. This information is given in Tables XVI and XVII.

The considerable variety of work which high-school pupils in these cities find to do is significant. While a number of these employments would have to be classed as "juvenile occupations" and as not leading anywhere in particular, a "juvenile occupation" is not altogether to be condemned in these cases. When a boy or girl is in school, such a type of work, even though it does not lead directly to any future vocation, is a steady influence upon the youngster, serving to give a little experience in personal responsibility and in the practical side of life. The experience of earning money for oneself, even in a temporary employment, is a preparation for future work that is decidedly worth while.

TABLE XVI

KINDS OF WORK FOR WHICH MONEY IS EARNED. MENTIONED BY TWO OR MORE PUPILS

Clerking.....	92	Usher.....	4
Odd jobs.....	70	Picture show.....	4
Helping at home.....	48	Printing.....	3
Delivering papers.....	44	Reporting.....	3
Farming.....	19	Telephone office.....	3
Music teaching.....	16	Elevator boy.....	3
Vacation work.....	15	Automobile and motor and cycle repairs.....	3
Music and singing.....	14	Distributing ads.....	3
Collecting.....	12	In bank.....	3
Delivery boy.....	11	Engineering gang.....	2
Shop and office.....	10	Tailor.....	3
Caring for furnace.....	10	Painter.....	2
Factory, mill, etc.....	10	Hunting.....	2
Canvassing.....	9	Fancy work.....	2
Office attendant.....	9	Railroad office.....	2
Chauffeur.....	8	Newspaper office.....	2
Photography.....	8	Sheet metal.....	2
Artist.....	6	Mechanic.....	2
Poultry.....	6	Baking.....	2
Waiter.....	5	Y.M.C.A.....	2
Barber.....	5	Salesman.....	2
Janitor.....	5		

TABLE XVII

KINDS OF WORK MENTIONED BY ONE PUPIL ONLY

Reading gas meters	Fishing
Millinery	Delivering eggs
Staying with neighbors nights	Mowing lawns
Checking	Pumping church organ
Making pennants	Plumbing
Selling cream	Garage
Selling milk	Window-trimming
Typewriting	Sewing
Dentist's office	Pantatorium
Selling peanuts	Messenger
Running a boat	Greenhouse
Soda fountain	Engineer
Electrical work	Artist's model
Helping neighbors	Carpentry
Auto sales	Library work
Substitute teacher	

TABLE XVIII
DIFFERENT KINDS OF WORK MENTIONED BY BOYS AND GIRLS

	Boys	Girls	Combined
Iowa City.....			37
Dubuque.....	36	6	39
Ottumwa.....	36	17	44
Burlington.....	23	15	35

It is hardly to be expected that many high-school pupils, with the best part of their day given up to school work, should find much time outside to spend in preparing for any particular vocation. And yet out of the 618 who report themselves as earning money, 36, or nearly 6 per cent, are doing outside work more or less directly related to what they are planning to do when they leave school. Table XIX shows just what these employments are.

TABLE XIX
CORRELATION BETWEEN OUTSIDE WORK FOR PAY AND VOCATIONAL
INTENTIONS

Collection.....	1	Bank.....	2
Office work.....	1	Manufacturing and artisan.....	2
Teaching.....	1	Engineering.....	2
Domestic science and art.....	4	Auto repair.....	1
Clerking.....	2	Tailoring.....	1
Teaching music.....	6	Dentist's office.....	1
Singing and music.....	4	Railroad office.....	1
Farming.....	4	Artists.....	2
Salesmanship.....	1		

In view, however, of the present interest in vocational education, the question may be raised whether the conditions here shown are as favorable for high-school boys and girls as they should be. Should not the school and the community attempt to provide more opportunity for these pupils to get work which will minister more directly to their vocational interests? As long as the school studies pursued by these pupils are so largely of the purely "liberal" or cultural type there can, of course, be little relationship between school work itself and work outside. Furthermore, it must be recognized that many types of vocational interest, such as engineering, law, medicine, or teaching, could not usually find any opportunity for expression during the school years. But there are

also many interests which might find expression while the pupil is in school. To bring about such a connection, the school on its part would have to give more attention to cultivating the vocational interests of its pupils. With no special effort on the part of the school to cultivate such an intelligent insight into the diverse opportunities of the modern world, the range of interests already possessed by these Iowa pupils is comparatively limited, as we saw above in Table III. If the school would undertake to enlighten its pupils systematically as to vocational opportunities, and if it would also provide more vocational studies and give more attention to the practical relationships involved in the ordinary studies, the pupil would be provided with a better basis on which to go out into his community and choose his work.

But the community also should do something, perhaps under the leadership of the school. The modern community should be led to take a more direct interest in the future of its children than is expressed in simply providing them with school opportunities. People engaged in different lines of work should feel a responsibility for providing ways for boys and girls who are inclined in various directions to gain a little experience in the work that interests them while they are going to school.

The industrial schools have already begun to work out and apply various schemes of part-time employment in the trades for their pupils, but what we have in mind here is a more general and less intensive application of the idea. Not that the boy in the ordinary high school who wishes to work shall be employed in some trade—for example, in alternate weeks—but rather that opportunities shall be carefully developed in every community whereby many such boys and even girls shall gain some slight contact with different vocations in their outside work. Such contact should give the youngster not merely a chance to make a little money but also an insight into, and a practical appreciation of, the requirements of the vocation he wishes later to follow.

As to the social and recreational interests of these 1,400 Iowa high-school pupils, Table XX summarizes the returns as to the number of parties, moving-picture shows, and theaters per month, which they report themselves as attending. The reports from different cities are fairly uniform.

As in the case of preceding tables, the reader will have to interpret these figures for himself. Possibly no one of these diversions, by itself, is indulged in by large numbers to excess, but taken together they represent a considerable expenditure of time in at least three forms of amusement. In most cases the pupil who

TABLE XX
PARTIES PER MONTH ATTENDED BY IOWA HIGH-SCHOOL PUPILS

	NONE OR LESS THAN 1		1		2		3		4		5		6		7		8 OR MORE	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
	196	161	117	199	128	216	56	94	36	58	22	31	10	23	2	2	9	4
Percentage . .	26		23		25		11		8		4		2		0.3		1	

About 48 per cent attend 1-2 parties per month.

About 26 per cent attend more than 2 parties per month.

About 26 per cent attend none or less than 1 party per month.

MOVING-PICTURE SHOWS PER MONTH

0		1-3		4-6		7-9		10-15		16 OR MORE	
Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
91	176	153	265	185	197	57	63	71	64	53	43

THEATERS ATTENDED PER MONTH

NONE OR LESS THAN 1	1		2		3		4		5		6		7		8 OR MORE			
	Boys	Girls	Boys	Girls														
	109	230	15	134	101	138	58	61	75	85	23	19	26	19	9	4	30	16

goes to few or no parties does not indulge in the other forms of amusement. The general tendency is for all to be represented in about the same proportion in the pupils who do participate at all. These figures will be taken by some as a proof of the statement often made that it is not the school work as such which is injurious to the health of the ordinary adolescent but that he suffers most from the multiplicity of his *outside* interests.

THE NINETEENTH MICHIGAN CLASSICAL CONFERENCE

FRANCIS W. KELSEY
University of Michigan

The Nineteenth Michigan Classical Conference was held in Ann Arbor, April 2, 3, and 4, 1913, in connection with the annual meeting of the Michigan Schoolmasters' Club. In respect to administration this conference was the most important yet held. From the beginning, in 1894, the organization has been the simplest possible. Nevertheless certain traditions have become established; in order to make it easier for new officers to take up their tasks in 1912 "it was voted to formulate the working plan of the conferences, so as to define more clearly the duties of the officers, and a committee of three was raised, with instructions to report at the next conference" (*School Review*, XXI, 191). The report of this committee (consisting of Dr. F. O. Bates, Central High School, Detroit; Miss Maude Parsons, Western State Normal School, Kalamazoo; and F. W. Kelsey) was presented at a business session on April 4, and unanimously adopted. The report, which becomes the constitution of the Conference, is here given in full.

WORKING PLAN OF THE MICHIGAN CLASSICAL CONFERENCE

1. *Aim*.—The aim of the Michigan Classical Conference shall be three-fold: first, to give to those who are doing work in Latin, Greek, and allied subjects an opportunity to present the results of research; secondly, to afford an opportunity for the discussion of questions of importance for the interests of classical scholarship and education; and thirdly, to promote acquaintance and co-operation among those engaged in classical work.

2. *Membership*.—All members of the Michigan Schoolmasters' Club who are interested in classical study shall be members of the Classical Conference, with the right to vote at all meetings. Members of the conference shall have the privilege of inviting to the meetings others interested in classical study, including guests from outside the state and students of the University, under a standing arrangement with the officers of the Schoolmasters' Club regarding free admission.

3. *Officers.*—The officers of the Classical Conference shall be a Chairman, a Vice-Chairman, and a Secretary elected by ballot after the report of a nominating committee. The term of office of the Chairman and the Vice-Chairman shall be two years. The term of office of the Secretary shall be one year with re-election understood.

It shall be the duty of the Chairman with the co-operation of the other officers to prepare the program each year, and to be responsible for the local arrangements for meetings. It shall be the duty of the Secretary to prepare or annually revise a card catalogue of teachers and others in the state of Michigan who are interested in classical work and to see that their addresses are furnished to the Secretary of the Schoolmasters' Club for the forwarding of programs and other printed matter.

4. *Social Committee.*—At the close of each conference the Chairman shall appoint a social committee of three persons whose duty it shall be to provide for an informal reception in connection with the succeeding conference and to arrange for a reception committee for the regular sessions of that conference as well as the reception.

5. *Extension Committee.*—There shall be a standing committee of three persons known as the Extension Committee of the Classical Conference, having full authority, under the general supervision of the Chairman, to carry to different parts of the state such extension of the work of the Conference as may be practicable at any season of the year. The members of this committee shall be selected by a nominating committee appointed by the Chairman. Of the three members first chosen one shall serve one year, one, two years, and the third three years. The term of service thereafter shall be three years, one member to retire annually.

The Extension Committee provided for in the last section was constituted as follows, the committee to select its own chairman: Miss Clara J. Allison, to serve one year, Professor E. D. Dimnent, to serve two years, and Professor A. R. Crittenden, to serve three years.

The officers chosen in accordance with Section 3 are: Chairman, Professor Campbell Bonner; Vice-Chairman, Professor B. L. D'Ooge; Secretary, Miss Anna S. Jones (address: Central High School, Grand Rapids). The chairman appointed Messrs. Sanders, Kelsey, and Winter to act as a local committee to arrange for an informal reception at the Conference of 1914, in accordance with Section 4; it was understood that this local committee, after making the necessary arrangements, would select a reception committee to serve at the meetings.

Four sessions were devoted to the reading of papers, lectures, and addresses. The session of Friday evening and the lectures by Professor Carl Bezold were announced also as a part of the program of the Schoolmasters' Club.

Program

Wednesday Afternoon, April 2

Presiding Officer: PROFESSOR CAMPBELL BONNER, University of Michigan

1. The Transition from the Roman System of Debating to the Modern System

PROFESSOR MARK BAILEY, Kalamazoo College

2. Solving the Problem of Secondary Latin. Discussion, including papers 2, 3, 4, and 5, arranged and conducted by

MISS CLARA J. ALLISON, Hastings High School

3. Radical Changes in Subject-Matter: A Venture and a Query

MISS OLIVE SUTHERLAND, Eastern High School, Detroit

4. Subordinative Quantity to Quality

MISS ELSIE E. COOPER, Ypsilanti High School

5. More Class Periods for Beginners

SUPERINTENDENT M. W. LONGMAN, Owosso

Superintendent Longman emphasized the beneficial results obtained through the periods of conference and study which were introduced into the program of the high school at Hastings, under the plan described by Miss Allison at the conference of 1912.

6. Caesar B.G. vi. 27. Again¹

FRANCIS W. KELSEY, University of Michigan

Two papers dealing with Caesar's statement about the creatures found in the Hercynian Forest have been presented at these conferences. One, by Miss Grace Griffith Begle, was entitled "Caesar's Account of the Animals in the Hercynian Forest"; this was published in the *School Review* in 1900 (VIII, 457-65), and aimed to show, by citation of other writers both before and after the time of Caesar, that we cannot reject the details of his account as "inconsistent with Caesar's information and belief." The other paper, by Miss Gretta Rose Wilner (*School Review*, 182-83), was concerned with an emendation by Paul (*statura for natura*, vi. 31. 1) and quoted biological authorities to show that Caesar's one-horned *bos cervi figura* is represented today by the European reindeer which in turn belongs to the same genus as the American caribou; Miss Wilner thus explained the statement regarding the single horn: "The reindeer sheds his antlers during the months of February and March, or even earlier in the winter. The man who reported the story to Caesar had probably seen one with only one horn left."

Some commentators have supposed that Caesar's informant had seen a reindeer which had lost one of its antlers; but it has also been suggested that Caesar or his

¹ Illustrated with the stereopticon.

informant might have seen a drawing of a reindeer in profile which, from lack of perspective, showed the two antlers as one. The latter explanation seems plausible enough because crude art has much difficulty in representing the two horns of animals sketched in outline, and abundant examples can be shown in which only one horn appears; a familiar instance is the antelope shown in the illustration on p. 11, Vol. II, of Smith's *Dictionary of Greek and Roman Antiquities*.

In visiting the Provincial Museum in Victoria, British Columbia, in November, 1912, I was greatly surprised to see a caribou there mounted with only one antler. It was clearly a degenerate specimen, representing a subspecies lately discovered in the Queen Charlotte Islands; it seems to have had only one antler when it was shot. The type is described, with illustrations, by Mr. C. Hart Merriam in an appendix to Charles Sheldon's *The Wilderness of the North Pacific Islands* (New York, 1912), pp. 233-35. "The sight of the stuffed specimen with one antler brought vividly to mind the statement of Caesar in our chapter, which seemed to lose the last vestige of difficulty. The evidence does not justify us in believing that the reindeer in Caesar's day was common enough to be a familiar sight to the natives as far south as the Black Forest; it prefers a colder climate than was to be found there in that period. Under such circumstances a single observation of the unusual might easily pass over into a generalization quite inconsistent with the facts."

In *The American Natural History* (New York, 1904; p. 119) Mr. W. T. Hornaday shows an elk with only one antler and also explains the shedding of antlers: "Many persons find it difficult to believe that the antlers of all these creatures drop off close to the skull every year and are completely renewed in about four months; but such is the fact. It is Nature's special plan to absorb the surplus strength of the males, and render them weak and inoffensive during the period in which the mothers are rearing their young, when both the does and their fawns would be defenseless against savage males with perfect antlers. It seems incredible—unless watched from week to week—that the enormous antlers of full-grown moose or elk can be dropped and completely renewed again in as short a period as four months; but it is true."

The American elk which appears in Mr. Hornaday's illustration must not be confused with the *alces* mentioned by Caesar in the following chapter. The European elk is related to our moose. A glance at a good pair of moose antlers, or at pictures given in such works as Mr. Hornaday's (p. 142) and Mr. Ernest Thompson Seton's *Life Histories of Northern Animals* (New York, 1909; Vol. I, Plate 7, and types of antlers shown on pp. 160-61) will make it plain how Caesar came to use the word *multilae* (suggesting an appearance as if "broken") to characterize antlers of this member of the deer family.

7. Roman Ruins in Timgad¹

PROFESSOR WALLACE S. EDEN, Ohio State University

An account of a recent visit to "the African Pompeii," illustrated with many slides showing the Arch of Trojan, the Forum, theater, temples, streets, and remains of houses.

Thursday Afternoon, April 3

Presiding Officer: PROFESSOR JOHN T. EWING, Alma College.

8. The Substantive Participle

PROFESSOR EARLE M. PARKER, Northern State Normal School, Marquette

¹ Illustrated with the stereopticon.

9. Greek and Latin in the Schools of Belgium: a Report

PROFESSOR JOHN G. WINTER, University of Michigan.

Published in the *School Review*, XXI (1913), 618-26.

10. Luther's Use of the New Testament in Latin before December, 1522

PROFESSOR WARREN WASHBURN FLOKER, University of Michigan,
assisted by

MISS CLARA D. MEYER, Bessemer High School

This paper is to be published as part of a monograph entitled *Luther's Use of the German Versions of the New Testament before 1522*, which will appear in the *Hesperia*, edited by Professor Herman Collitz, Johns Hopkins University. It is based on the quotations in Latin which are found in Luther's writings up to December, 1521, when, according to the generally accepted view, he began the translation of the New Testament into German direct from the Greek.

The collection of the quotations in Latin supplemented by the quotations in German (see Florer, *Luther's Use of the Pre-Lutheran Versions of the Bible*, Article I, George Wahr, Ann Arbor) will show that by December, 1521, Luther had practically completed the version which he is supposed to have prepared in the short period of the winter months at Wartburg. Furthermore, the repeated use of verses and passages of the Old Testament in both Latin and German before 1522 shows that Luther had worked out his general conception of the entire Bible before he began to retouch the version of the New Testament prepared at the Wartburg.

A table showing the Koburger version, 1483, *Luther's Use of the New Testament in German before 1522*, and the September Bible, 1522, will show just what changes were made by Luther in the version of 1522. This table, showing the quotations in Latin supplemented by extensive explanations, will prove that many of the changes, not explained by the substitution of the language of the people for the literal translations of the previous versions, were made direct from the Latin version and that the Greek original, when used, served only as a check or as a basis for the interpretation of passages which involved moot points of doctrine.

11. Some Thoughts about the Value of the Classics

PROFESSOR MORITZ LEVI, University of Michigan

Published in the *Journal of the Michigan Schoolmasters' Club* (1913), pp. 1823.

LECTURE (4:15 O'CLOCK)

Presiding Officer: PRESIDENT H. B. HUTCHINS, University of Michigan12. The Industrial Arts of the Ancient Orient¹

PROFESSOR KARL BEZOLD, University of Heidelberg

The two lectures delivered by Dr. Bezold on April 3 and 4 originally formed the second and fourth of a series of four lectures on "Ancient Oriental Art," which were devoted to a characterization of the various kinds of art discovered within the realm of the ancient North-African and Western-Asia Civilizations; these were treated from a comparative point of view.

In this lecture he endeavored to show how the civilized peoples of ancient Egypt and Western Asia artistically depicted the world surrounding them, with special regard to the flora and fauna of their respective territories. Material on one hand and religious conception on the other appeared here to have been the most important com-

¹ Illustrated with the stereopticon.

ponents in prompting the artistic impulse. The subject-matter of the works of art was in the first instance taken from conspicuous features of animals and plants, the latter having been studied with special enthusiasm by the Egyptian artists, while the best reproductions of animal forms are known from Assyria.

A comparison of the various products of ancient oriental industrial arts led to the conclusion that there existed three kinds or classes of original art, viz., the Egyptian, the Sumero-Babylonian, and the Hittite art; the works of the other nations of the portion of the ancient Orient concerned, chiefly the Canaanite-Phoenician and the Syrian, will have to be explained as either a development of one, or as a mixture of two, of these original classes. A kind of renaissance may finally be recognized in the Persian art, in which, though certainly its close connection with the late Babylonian is evident throughout, new motives appear to have sprung up which point to an Indo-European origin.

Friday Afternoon, April 4

Presiding Officer: PROFESSOR B. L. D'OOGE, State Normal College

13. The Material Bond between the God and the Worshiper

PROFESSOR CAMPBELL BONNER, University of Michigan

To be published.

14. Informal "Round Table" Conference and "Question Box"

Conducted by MISS ANNA S. JONES, Central High School, Grand Rapids

15. Keeping Greek in the Schools

MISS WINIFRED C. DABOLL, St. John's High School

Miss Daboll was asked to present a statement of the difficulties which confront the teacher of Greek in the high schools of smaller cities.

"We are one of the smaller high schools. With an enrolment of 180 we have at present 90 in the Latin department. We have a club whose object is to stimulate interest in the classics. Each year we give a play, from the proceeds of which in the past two years we have put nearly \$200 into Caproni casts—the Minerva, Hermes, Hebe, Diana, Aurora, and Apollo and the Muses—and a plaster model of ancient Rome. We have a mirrorscope and 200 views of Rome. By using the latter in connection with the model of Rome, it has been easy to arouse an intelligent interest in archaeology. The statuary has effected the same end in art. In general, I think we have considerable enthusiasm in the classical department.

"I have spoken at length of my Latin work because I believe the same enthusiasm might exist for Greek—of course with less numbers. I think there has never been a time in the past ten years when I could not have had some Greek students. The difficulty has been to convince the authorities that Greek is important enough to receive a place in the curriculum. One year I started in (teaching the class after school hours) with seven students, all expecting to go to college. Of these, three were obliged to drop out during the year because, as no credit was given, they were under the necessity of carrying four or five subjects besides. The following year two of the seven continued their Greek in college and the other two continued their Xenophon and Homer with me. The same year I had requests from five for Greek and I have seven for next year; but with my crowded program a class is impossible.

"I have said that we have plenty of enthusiasm, but I sometimes think it is a battle which I wage alone. To use Professor Gayley's phrase, "We are joined unto idols of play and utility. We advertise widely our manual and physical training and agriculture departments, and have found room for them in an already overcrowded building. But when I have asked for Greek I have been told that not enough wish it, though we have maintained classes in stenography and agriculture for only two members."

16. An Experiment with the Direct Method

DR. FRANK E. ROBBINS, University of Michigan

Published in the *Classical Weekly*, VII (1913), 54-55.

17. What Recent Books and Illustrative Materials Are of Value for Classical Teachers? An exhibit of recent publications, in charge of

PROFESSOR A. R. CRITTENDEN and PROFESSOR J. G. WINTER, of the University of Michigan

LECTURE (4:15 O'CLOCK)

Presiding Officer: DEAN J. R. EFFINGER, University of Michigan

18. The Religious Art of the Ancient Orient

PROFESSOR KARL BEZOLD, University of Heidelberg

The difference between the study of the so-called revealed religions, possessing sacred canons, and the investigation into the religious systems without such fixed starting-points was referred to, and the influence of the climate on the way of settling in a country as well as of great political events on the development of a religion was illustrated. Starting again from Egypt, the old animism, and especially the animal worship of that people were characterized; these in the course of time were replaced by cults of anthropomorphized deities and were subsequently further modified by political events as well as by myths and legends.

A similar process was to be expected in ancient Western Asia; the lecturer endeavored to show that by the side of the well-known Babylonian astral religion, in very early times, an animal worship must here also have originated which in the Assyrian epoch survived in certain legends, and in traces was preserved throughout the vast omen literature of that people. A discussion of the prominent Marduk cult in Hammurabi's time served as an illustration to prove the influence exerted by certain historical events on the development of religion, and the Creation and Deluge stories were cited as examples of the various legends which inspired the mind of the Assyrian artists.

As a type of art spread over the whole East and illustrating the derivation or mixture of old original forms, the "sphinx" was traced from its Egyptian home and from the Hittite capital at Boghasköi to Northern Syria and Phoenicia. A few specimens of Persian art were finally shown, as the immediate predecessors of the immortal works of Hellas.

Friday Evening, April 4

Presiding Officer: F. W. KELSEY

19. Address: The Paradox of Oxford

MR. PAUL ELMER MORE, Editor of *The Nation*, New York

Published in the *School Review*, XXI (1913), 191; and *University of Michigan Bulletin*, XV (1913), No. 5, pp. 1-17.

THE STATUS OF HISTORY TEACHING IN THE HIGH SCHOOLS OF KANSAS

ENROLMENT AND PREPARATION OF TEACHERS

H. T. STEEPER
Abilene High School, Abilene, Kansas

Sources of information are: (1) *State High-School Directory* issued by School of Education, University of Kansas (1911-12); (2) *State High-School Directory* (1912-13); (3) Data on enrolment from records of *High-School Visitor*, University of Kansas (1912-13). On account of difficulty of getting specific information for a directory, allowance must be made for some small inaccuracies.

I. *Enrolment in subject enrolments, not pupils.* (Some pupils are probably enrolled in two or more subjects.)

A. Courses according to number enrolled.

1. Greek and Roman.....	7,092
2. Mediaeval and Modern.....	3,318
3. American.....	3,412
4. Civics.....	2,887
5. English.....	690
6. Economics.....	659

The first great drop in enrolment, between Greek and Roman, and mediaeval and modern, leaves enrolment for the latter less than half the former. This is owing largely to four causes: the decrease in high-school enrolment between the Freshman and Sophomore years; the traditional place of Greek and Roman history in the high-school curriculum; the greater number of electives offered in the Sophomore and Junior years; and the lack of teachers prepared to handle mediaeval and modern history.

The enrolment in United States history shows an increase over that of mediaeval and modern. Among the reasons for this are: the nature of the course itself—our national history; its requirement in normal training and often in college preparatory and other courses.

On account of its bearing on citizenship and its requirement in normal training, civics compares favorably in enrolment with mediaeval

and modern history. It is a deplorable fact that a course which trains directly for citizenship should not invite as heavy enrolment as does ancient history. As a prominent educator remarks, we are still putting our stress in some directions on making good Romans rather than good Americans.

The enrolment in English history is comparatively very low. The fact that English history is included in mediaeval and modern is probably largely responsible for this.

Economics enrolls the smallest number of the group. It is one of the newer subjects in the Kansas high-school curriculum, and is perhaps still in the experimental stage. It is becoming established and is justifying its place in most of the schools where it has been given a fair trial. Schools in the Kansas State High-School Debating League are finding it popular and very helpful in connection with this work. Its immediate connection with the present industrial and economic age, it would seem, should cause it to be received with increasing favor. Contrary to what one might expect, of the 659 enrolled in economics, 349 were girls and 310 boys.

Summary of enrolment in history group:

Boys.....	7,433
Girls.....	10,425
Total.....	17,858

Of the high-school enrolment in the state 14.1 per cent of the work of boys and 13.7 per cent of the work of girls is in the history group; this is 14 per cent or $\frac{1}{7}$ of all the high-school work.

The high-school subject groups ranked according to enrolment are: English, mathematics, foreign language, vocational subjects, history, science. There is an average throughout the different groups of about 3,000 more girls than boys. History holds its own in this respect. This would seem to promise well for woman suffrage.

II. Preparation of teachers.

What quality of instruction is offered in this 14 per cent of the high-school work?

A. Number of teachers of history.

1911-12.....	420
1912-13.....	448

(Discussion based on 1911-12 *Directory*. The later *Directory* not off the press in time for use.)

B. Distribution according to work.

1. Departments—41 teaching history only.

Superintendents and principals teaching only one or two classes are included in this number.

2. Combinations with other subjects.

History is combined with 27 other subjects numbering from one to five additional subjects per teacher.

History combines with a single subject 127 times

" 2 subjects	164	times
" 3 "	76	"
" 4 "	12	"
" 5 "	1	time

The most common combinations are:

With languages 285 (English included)

" science 182

" mathematics 121

" normal training 85 (Importance of last combination is greatly increased by the teaching work of superintendents and principals.)

History combines with English 149 times

" mathematics	121	"
" Latin	94	"
" physics	51	"
" psychology	43	"
" German	39	"
" botany	39	" etc.

C. Degrees

Of 420 teachers 255 have degrees—that is, 60.7 per cent.

These degrees are from 60 different schools as follows:

University of Kansas.....	81
Baker University.....	23
Washburn College.....	13
College of Emporia.....	13
Kansas State Agricultural College.....	12 (11 are B.S.)
Kansas Wesleyan.....	10, etc.

Thirty-two of the above 255 are Master's degrees, or 12.5 per cent.

D. Special training for teaching history.

(Based on 1912-13 *Directory* material.)

Of the 448 teachers of history in the high schools of Kansas for 1912-13, 221 had prepared to teach history; the remaining 207, or 46 per cent, have no special preparation for the teaching of history; 152 prepared to teach history but are teaching something else.

EDUCATIONAL NEWS AND EDITORIAL COMMENT

A CORRECTION

In the January number of the *School Review*, p. 20, the residence of Dr. Charles H. Keene is erroneously stated. The author of "The Effect of Conditions of School Room Heating and Ventilation on School Room Attendance" is a resident of Minneapolis, Minnesota, in charge of the Department of Hygiene of the Board of Education.—THE EDITORS.

NORTH CENTRAL ASSOCIATION

The North Central Association of Colleges and Secondary Schools will meet in the La Salle Hotel, Chicago, on Friday and Saturday, March 20 and 21, 1914. Following are the details of the program:

FRIDAY, MARCH 20, 10:00 A.M.

President's Address, Professor Fred N. Scott, University of Michigan.

Reports of committees.

Paper: Henry E. Brown, principal of the New Trier Township High School, Kenilworth, Illinois.

Discussion led by members of Mr. Brown's committee.

FRIDAY, MARCH 20, 2:00 P.M.

Report of the Commission on Accrediting Schools and Colleges. Professor C. H. Judd, University of Chicago.

Discussion: "Special and Conditioned Students in Colleges in the North Central Territory." Dean K. C. Babcock, University of Illinois; Dean L. A. Weigel, Carleton College; Dean Thos. F. Holgate, Northwestern University.

SATURDAY, MARCH 21, 10:00 A.M.

Paper: "Responsibility for Moral Instruction in the Secondary Schools." Superintendent C. E. Chadsey, Detroit, Michigan, Schools.

Discussion: Superintendent W. J. S. Bryan, St. Louis Schools.

The high-school inspectors will meet at the La Salle Hotel, Chicago, on Wednesday, March 18, at 8:00 P.M., and on Thursday, March 19, at 10:00 A.M.

The Commission on Accredited Schools and Colleges will meet at the La Salle Hotel, Chicago, on Thursday, March 19, at 2:00 P.M., and at 7:30 P.M.

RELIGIOUS EDUCATION ASSOCIATION

The eleventh annual convention of the Religious Education Association is to consider the single topic, "The Relation of Higher Education to the Social Order." Educational experts and well-known leaders will present reports on the efficiency of colleges in preparing young people for the exacting demands of modern social living. The interest of the convention centers in the question whether the colleges are consciously training for complex civilization and especially whether these institutions succeed in developing moral competency and in leading to a religious interpretation of life. The convention will be the guest of Yale University, March 5-8.

Among the speakers are John R. Mott; Charles S. Whitman, district attorney of New York; Governor Simeon Baldwin, of Connecticut; President William De Witt Hyde; President Samuel A. Eliot; Rabbi Stephen S. Wise, of New York, and ex-President Taft.

PRESIDENT M. A. BRANNON, UNIVERSITY OF IDAHO

Dr. M. A. Brannon, dean of the College of Liberal Arts, the University of North Dakota, will begin his new duties as president of the University of Idaho the first of April. Dr. Brannon is a graduate of Wabash and received his higher degree at the University of Chicago. Dr. Brannon is a scientist of distinction. Under his leadership was conducted a state biological survey of North Dakota, and a State Biological Station was established at Devil's Lake. Another administrative task accomplished by Dr. Brannon is the establishment of the University School of Medicine, of which he has been dean for eleven years. These activities, even when added to his duties as dean of liberal arts, have not prevented President Brannon from making valuable contributions to the literature of his science, botany.

A RADICAL SUGGESTION

The *Syracuse Post* of January 26 contains the following item:

A plea to have the public schools in session from 8 o'clock in the morning until 5 o'clock in the afternoon, with a moderate allowance of time for lunch, was made by Superintendent of Schools F. D. Boynton of Ithaca, in an address before the Clean City Movement this afternoon. Many of the present school systems Mr. Boynton attacked as archaic. He said: "With the present short sessions the child cannot be well enough supervised during all the time his parents are at work. In Ithaca, if he slides down hill, plays ball in the street,

or walks on the grass he is arrested. We have a class of juvenile offenders who break city ordinances because they do not know what else to do during their spare moments.

"The boy should be at school from 8 o'clock in the morning until 5 o'clock in the afternoon, six days a week. His elders put that time into work and so should he. I do not say he should study Latin and algebra all that time. He should have physical culture, manual training, and aesthetic culture as well. We make no effort to meet the changed conditions occasioned by life in the cities. In the early New England days the children learned only reading, writing, arithmetic, spelling, and grammar. Now we expect the children to study many other subjects, but allow them no additional time to devote to the extra work."

THREE-YEAR HIGH-SCHOOL COURSE IN CHICAGO

One result that may be attained by the longer day is indicated in the following announcement:

Pupils in Chicago high schools may be able to complete the regular course in three years instead of four under the revision of the course of study which will be put into effect today. This change is the result of recommendations made by high-school principals Saturday. The change will mean that in the future there will be eight study periods instead of six, as in the past. This increasing of the periods will add one hour to the high-school session.

THE VERMONT SCHOOL SURVEY

The commission appointed by the legislature of Vermont to inquire into the entire educational system of the state has recently submitted its report. Honorable John A. Watson, judge of the Supreme Court, is Chairman of the committee, which includes President Butler of Columbia, Theodore N. Vail, president of the American Telegraph and Telephone Company, and six other distinguished gentlemen. This commission, fulfilling its orders to recommend such reorganization of public elementary and secondary schools "as will promote the ends of unity, harmony, economy, and efficiency," submits the findings of their experts employed from the Carnegie Foundation.

The commission "recommends the adoption of almost a brand-new system of supervision and administration." It urges that there shall be adopted "a course of study relating to the life of the child," teaching him how to discipline himself, how to think, and how to strengthen his relations to the social and industrial interests of his community. Another recommendation is that educational administration be provided that will bring to every school sympathetic advice; that such

administration, in all its phases, should be absolutely free from political entanglement. The present system of district superintendence is condemned, and a new plan of supervision by local officers is advocated. Third, the commission attaches great importance to the providing of a requisite number of thoroughly trained teachers. Again the commission asserts that the supreme duty of the state is to care for elementary and secondary education, and recommends that state subsidies to colleges cease, after a reasonable time given to the colleges for readjustment. These subsidies now amount to \$130,000 out of a total state budget of education of \$525,000. In this last recommendation, an exception is made in the case of the State Agricultural College, which ought, in the judgment of the commission, to receive even larger state and federal appropriations than it now enjoys. Another significant suggestion is that three-fourths of the high schools be turned into "junior" high schools, and that only 16 to 18 complete secondary schools be maintained; each regional high school to serve a wide area.

THE MERGER OF HARVARD AND TECHNOLOGY

The consolidation of educational endeavor in secondary schools urged by the experts for Vermont is interesting in the light of a merger recently accomplished of two institutions foremost in the college world. Harvard University and the Massachusetts Institute of Technology have at last found a basis of co-operation by means of which is removed a highly expensive and unnecessary duplication of effort. In 1904-5 Presidents Eliot and Prichett attempted to amalgamate the overlapping branches of the two institutions. This plan of a decade ago failed largely because of the almost unanimous opposition of the constituency of the Institute, who feared that the identity of their institution would be lost in that of the university. Thereupon the McKay bequest of several millions was used by Harvard to establish a graduate school of applied science. Meanwhile Technology has moved from Boston to Cambridge within two miles of the Harvard Yard.

Of late years the educational waste of this duplication has become evident. The current year finds Harvard with very few, one report indicates less than 60, graduate students in engineering, while Technology has 250 students of the same grade. Presidents Lowell and MacLaurin with wise forethought have agreed upon a plan by which Harvard gives up entirely the field of engineering. Her whole engineering faculty, together with the funds of the Lawrence Scientific School and most of the McKay bequest, go over bodily to the Institute. Upon

certain students graduated from the Institute will be conferred the Harvard degree. Thus the future will see one largely endowed and excellently equipped institution on the banks of the Charles, giving the best possible instruction in all branches of engineering.

SIGNS OF SIMILAR NEEDS

The sight of two great private institutions facing squarely and solving unselfishly the problem of duplicating efforts has great significance. No thoughtful observer of American education can fail to realize how urgent is the need of a widespread application of the same principle in almost every section of the country. One state in the Middle West has nine full-fledged normal schools and is said to be projecting others. These institutions, rivals in one sense, are co-operating in an endeavor to secure permission to enlarge their courses that they may grant the A.B. degree. Six colleges, together with the state university, have so far succeeded in blocking the designs of the normals. A neighboring state has four flourishing state institutions, in addition to more than twenty colleges. The state institutions successfully defeated an attempt to consolidate and to co-ordinate their work, because on the part of each some necessary sacrifice was involved. This same experience has been duplicated in at least two other states. The president of one denominational college, almost exhausted by the effort to keep his college alive, seriously contemplated asking the state to make it over into a state institution.

The process of building out of such a hodge-podge a truly scientific and economical system of higher education will be long and difficult. Nevertheless the same foresight which in the future is to prevent the unnecessary duplication of churches in the home field and of establishments in the foreign field must soon come to our educational administrators. Harvard and Technology have pointed the way. In this connection it is in point to note that two small institutions for women in Texas are joining forces. At the expiration of the present school year Carleton College of Bonham is to be moved to Sherman and joined to the Carr-Boidette College.

LONGER SESSIONS IN GENERAL

Commissioner Claxton in a recent address asserted that the summer vacation "is primitive and preposterous"; that it harks back to the time when teachers and pupils were needed on the farm three or four months a year; and that on the contrary the most important problem of today "is to keep city boys from three months' contamination

in the streets." The Commissioner, therefore, advocates a plan recently submitted by Clyde Allison Mann, secretary of the American Society for Thrift: one vocational teacher in each school to be employed all the year; in the city going from home to home to supervise horticulture and gardening on vacant lots; and in the country remaining at the school plant to give instruction in scientific principles underlying agriculture. Mr. Claxton pointed out that in a few years two million children could be interested and that their labor would yield tens of millions of dollars annually.

We pass by the specific suggestion of Mr. Allison merely by saying that it is in line with the demand constantly becoming more insistent in St. Paul, in Ithaca, in Duluth, and everywhere, that there ought to be wider use of school plants. If a private corporation had a chain of plants valued at two billions of dollars, occupied in production but one thousand hours, six hours a day for approximately 166 days, the manager of that corporation would estimate his annual loss to be in the neighborhood of thirty millions of dollars. A second line of argument for both longer school days and sessions is that in the cities, at least, no duties have come to supply the tasks of the farm, the chores of the boy and the house duties of the girl; that city children are becoming more and more helpless as a result of the idleness imposed upon them by city life; and that the boys, at least, are exposed through their long evenings and holidays to the vicious influences of the street.

It is somewhat amusing to note to what extreme those who oppose the extension of school activities resort. It is stated, for example, that no work is more taxing on the nervous system than teaching school, and that a teacher after nine months' labor needs a rest. Suppose this be granted for the sake of argument. Any other industry would provide shifts of teachers. It is contended also that teachers in the United States are paid for nine months only, while in other countries they are paid for twelve. If this be true, and it is probably true, it is a serious economic waste. Moreover, it is a significant fact that few teachers dependent upon their earnings reject an opportunity to teach in the summer. Again it may be pointed out that an industrial enterprise losing annually thirty millions of dollars (Commissioner Claxton's estimate) would raise the pay of its employees, if necessary, to save a portion of that loss. Indeed teachers in general have sentimentalized the belief that they are underpaid and overworked. Really competent teachers, fortunately, are ashamed to take shelter in such a subterfuge. Teachers do not work harder than workmen in other professions.

But your sentimentalist comes forward with the related argument

that children are now overtaxed by their school activities. Against this assertion it may be stated that school hours are relatively short; that they are not overexacting; that they are broken up by frequent periods of rest; that an extended school day may, by a greater variety of activities, make provision for relieving strain; and finally, that in many cities the overcrowded population furnishes abundant raw material to keep the educational plants running a larger share of the time with different groups of children. It may confidently be said that the increased amount of supervised study made possible by the proposed changes can do much to relieve overtraining if it really exists. It seems much more likely that the main advantage of longer sessions might be in preventing delinquency, both in scholarship and in morals.

A third line of argument is that the home and that the church, not the school, should keep the child from the street and should supervise his moral training. To this it may be replied that the school ought, at least, to co-operate in such a good cause. The indubitable fact stares us in the face that hard work organized so as to engage the vital energies of mind and body, together with hard play organized and supervised with equal care, are the greatest safeguards against the degenerating agencies. In organized work and in organized play neither the home nor the church has an opportunity equal to the opportunities of the schools.

HELPFUL SUGGESTIONS FOR LABORATORIES AND LIBRARIES

The revised edition of the *Circular of Information to Accredited Schools*, recently published by the University of Missouri, contains two sections which ought to be in the hands of every superintendent and principal in charge of a high school. Section II is entitled "Suggestions for the Equipment of Laboratories." Using as a basis of computation the needs "of twelve students working at one time," the bulletin sets forth in detail the minimum amount of apparatus and material necessary to equip a laboratory. The price of each item is listed. After describing the indispensable equipment in each subject, the circular presents a comprehensive list of dealers from whom purchases may be made. The subjects thus treated are physics, chemistry, botany, zoölogy, physical geography, physiology, agriculture, manual arts, and household arts.

Section III contains suggestions for the equipment of high-school libraries, presenting a list of books with the cost price of each, in twenty studies, from English to zoölogy. This list together with United States Bureau of Education *Bulletin No. 35* (1913), "A List of Books Suited to a High-School Library," will provide officers with a very reliable

selection of books for the school library. The latter bulletin is compiled by the teachers of the University High School, Chicago.

THE PEOPLE'S COLLEGE

In many of the communities on the Pacific Coast, especially in Southern California, the high school has really become a "people's college." Take such an institution as one finds at Hollywood, for instance, or at Pasadena, or even at a little town like Santa Monica. In these places, and others like them, the high school has a campus of from five to fifteen acres. At Hollywood the high school has six or eight commodious buildings for its work—one for arts and letters, another for domestic science, another for manual training, another for the mechanic arts, another for the boys' gymnasium, another for the girls' gymnasium, and so on. The buildings are not luxuriously equipped, however; in the school at Hollywood practically all the furniture is being made by the pupils themselves. In the courses in mechanic arts, the boys, as a regular part of their work, repair all the automobiles used by the board of education at Los Angeles. For their services the boys are allowed a certain amount of money which is devoted to the further equipment of the school, and particularly of this department. In the domestic science building, the pupils serve lunches for all the high-school pupils who desire it. They aim to furnish the food at about cost, but if they can save anything it is applied to some school need. A person going into this institution, or any of the others mentioned, is struck with the practical character of all the work. The modern languages, to give but one example in addition to those already mentioned, are taught so that a pupil can speak them and understand them when spoken in an incredibly short time in comparison with the results of the "good, old-fashioned" grammar formal-drill method still in vogue in some parts of the country.

M. V. O.

THE MOVEMENT TOWARD INDUSTRIAL EDUCATION

Professor O'Shea's comments upon the Hollywood school are in line with much discussion in the public press. It is filled with signs indicating a rapid growth of the movement toward vocational and industrial education. Lansing, Michigan, has adopted the "part-time plan," and has fifty boys working in pairs, half their time in the high school, the other half in the shop. In Columbus, Ohio, the merchants are urging the school authorities to adopt similar plans. Rock Island, Illinois, reports a winter course of three months for carpenters' apprentices, in

which the boys learn mathematics and architectural drawing in addition to woodworking. In Topeka, Kansas, Mr. E. H. Crosby, a leading merchant, has sent a public letter to Superintendent H. B. Wilson, urging that a thorough course in salesmanship be added to the commercial department of the high school. Woodward High School of Cincinnati adds a machine tool department, in which the pupils are taught the art of making tools. Road-building is being instituted in the district schools under County Superintendent Salmon of Frankfort, Indiana. Methods of road-building and of road repair are the subjects of instruction. To the other courses in the night sessions of the East High School of Waterloo, Iowa, is added this year a course in the study of the gas engine. Webster City, Iowa, adds to her city school system a night school of engineering free to all persons of school age. The work is to be conducted by a professor of engineering from Ames Agricultural College. The school board of Portland, Oregon, has formulated plans by which a complete course in printing, with an expert printer in full charge, will be placed in the Jefferson High School. In Los Angeles, California, efforts are on foot to establish courses in shipbuilding and clay industries. Lawrence, Massachusetts, has established courses in steam engineering under the chief engineer of the Arlington Mills.

In this and in almost unlimited evidence of similar nature, several distinct tendencies are easily discerned. First, a community is likely to lay stress upon a type of vocational work closely associated with the industry or industries of the community itself. Second, employers are active in the movement generally and often take the initiative in urging it upon the school authorities. They raise the old argument that the schools are not fitting efficient employees. They also see the desirability of shifting from themselves the increasing necessity of giving their employees needed instruction. Third, communities realize that provision must be made for many youths to support themselves by part-time work while they are in school. Fourth, in almost every case the school authorities are insisting that a reasonable amount of cultural work be added to the industrial curriculum. Fifth, the almost universal argument is that industrial training is necessary to keep young people from dropping out of school.

MENOMINEE, MICH.,
Saturday, January 31, 1914

To the Editor of the "School Review":

In the December issue of the *School Review*, Mr. Gosling said, in substance, that there might be a common cause of both poor scholarship and smoking. Observations carried on for seven years in two small high schools in which time

more than six hundred pupils were observed, and among these 156 smokers, would seem to support this statement.

There is abundant evidence that the smokers are inferior in scholarship to the non-smokers. The general average of the non-smokers in scholarship in this period was 5½ per cent more than that of the smokers. The number of failures among the smokers was nearly twice the number of failures among the non-smokers. The smokers furnish nearly 67 per cent of the cases of delinquency. There was no one who learned to smoke in the Senior year, and nine-tenths of the smokers learned before the age of seventeen. In all physical contests the evidence was unmistakably in favor of those who do not smoke.

Without exception the boys who began smoking after entering the high school deteriorated in scholarship after learning; but there is one remarkable thing about this: they began to deteriorate before they began to smoke in more than half the cases.

A more thorough investigation brought out the fact that most of these boys who smoked had no regular employment mornings, afternoons, and vacations; and that all of these boys learned to smoke while in idleness. Of the boys who were busy there were but few among the habitual smokers. Many of these smokers had employment, or could have it; but they suddenly gave it up and began to loaf in the resorts for boys which encourage loafing. Idleness in school or out was the inevitable forerunner of both poor scholarship and the habit of smoking, except in the case of those boys who learned to smoke before entering the high school.

It is an open question whether idleness leads to a breaking-down of ideals and, hence, leads to smoking and poor scholarship; or whether there is a breaking-down, somewhere, which leads a boy to idleness, to loafing, to failure, and to all the rest. Is there something in the environment of these boys which leads to delinquency, or is there something which is not in their environment which should be there to prevent delinquency? Or is it all a condition in the very nature of the boy against which we can do nothing?

I believe, however, that we must provide employment for the boys which will give both their minds and their bodies a daily task. A normal, healthy high-school boy, whose time is occupied in good, wholesome employment, will rarely begin to smoke. Idleness brings a blight upon boyhood. The home now fails to furnish wholesome employment for the leisure time of the boys as it did years ago. The school has failed to meet this need adequately. Is this not a part of the problem?

Sincerely,

J. N. DAVIS
Superintendent of Schools

NOTE.—The *Kansas City (Missouri) Times* announces that if a boy in the Chillicothe high school does not smoke during his course he receives one-quarter unit of extra credit.—THE EDITORS.

BOOK REVIEWS

A Cyclopedia of Education. Edited by PAUL MONROE. Vol. IV. New York: Macmillan, 1913. \$5.00.

The fourth volume of this work, like the preceding ones, is a mine of information for everyone, whether teacher, student, or "the general public." There are technical articles of interest chiefly to teachers such as "Mental Arithmetic," "Objective Method," "Perception," "Memory." There are noteworthy articles for the specialist in educational science, among which should be mentioned, first of all, Dewey's contribution on the "Philosophy of Education." This article will be extremely valuable for the orientation of current thought along the line of the principles of education. The specialists in different educational fields will find in this volume many long technical articles of special interest to themselves. Among these may be mentioned, "The Middle Ages," "Military Education," "Modern Languages," "English Literature," "Logic," "Music and Musical Terms," and "Music in Education," "National Government and Education," "Oxford," etc. Parents and the general reading public, as well as educational experts, will find such articles as the following of much interest: "Children's Literature," "Maps," "Medical Inspection," "Missions," "Moral Education," "School Museums," "Parent-hood," "Peace," "Pensions," and "Philanthropy." Some of these articles are long and give very comprehensive views of the subjects treated.

State and national educational systems continue to be well treated. The biographical material given on educators and philosophers and psychologists is abundant but concise. The system of cross-references is especially well worked out.

A considerable number of very sketchy, unilluminating paragraphs on various subjects occur in this as in the previous volumes. It is of course easy for a busy man to whom a certain set of articles has been assigned on subjects on which he has a few general ideas to yield to the temptation of throwing out a set of quite casual and commonplace remarks on his various assignments in lieu of real scholarly treatments. The articles on "The Psychology of Number" and "Magic" are illustrations.

The more carefully one examines these great volumes, the more does one feel that they constitute a reference work of great value for all intelligent classes of people. It is a cyclopedia of education in the broadest sense of the word, covering a wide range of subjects related to the development of human culture. The reviewer is becoming accustomed to turn to it instead of to more bulky works for much general information and he is constantly surprised at the extent to which it lends itself to this use.

IRVING KING

STATE UNIVERSITY OF IOWA

Industrial Education: Its Problems, Methods and Dangers. By ALBERT H. LEAKE. A Hart, Schaffner & Marx Prize Essay. Boston: Houghton Mifflin Co. Pp. xi+205.

The objects and aims of industrial education are well stated, and a valuable analysis is made in reference to the school attendance and education of present industrial workers. The author states that any scheme of industrial education must have its beginnings in the elementary schools. Compulsory attendance alone will not solve the problem: the elementary schools must be revitalized and the instruction be given a more practical character. A new type of school should be established which will train the boy and girl from thirteen to sixteen years of age directly for the industries. Attendance at a continuation school should be compulsory for a limited number of hours a week up to at least the age of sixteen years.

Manual training is not to be cast aside as useless, but should be given an industrial value by the use of shop methods as much as possible. Teachers of the subject should have above all an accurate knowledge of shop requirements, methods, and conditions.

The author holds that some form of apprenticeship is necessary, and also some form of intelligent vocational guidance by parents and teachers.

While much can be learned from foreign systems, their wholesale adoption would be a grave error. Fundamental differences in the economic and political conditions, and in the temperament of the peoples of the Old World and the New must be carefully considered.

The book is written from a practical standpoint and is well worth reading.

S. H. ZOOK

UNIVERSITY OF CHICAGO

Vocations for Girls. By E. W. WEAVER. A. S. Barnes Co. \$0.75.

This little book of 192 pages describes in a very general way about twenty occupations open to girls and women. It is very simply written. The material for the book was collected by a committee of Brooklyn (New York) teachers to be used in the vocational guidance of schoolgirls. The book is admirably adapted to that purpose. There is not a page that could not be read with ease and profit by a child in the seventh grade. The practical exercises at the close of each of the 33 chapters are very thoughtful and suggestive, and the public-school teacher who is consciously attempting to aid girls in their proper choice of a gainful pursuit will find them especially valuable. It will be remembered that Mr. Weaver, the author of the book, was a pioneer in the organization of vocational guidance in this country. He began his practical work in Brooklyn as early as 1908, about the time Mr. Frank Parson was advocating the organization of a vocation bureau in Boston. For five years Mr. Weaver personally conducted a vocation bureau for Brooklyn boys in his own home at no little expense to himself. He has recently been made the director of the Vocational

Guidance and Industrial Education Bureau of the Buffalo Chamber of Commerce, Buffalo, New York. The purpose of the book, as stated by its author, is "to provide a summary of the available information relating to the conditions for admission to gainful occupations and to present in suggestive forms the methods by which workers may advance themselves. No claim is made for scientific accuracy or completeness." With the spread of vocational guidance the literature on the subject will no doubt greatly increase in value. At present the public must be content with efforts such as the publication of this book presents.

E. E. LEWIS

STATE UNIVERSITY OF IOWA

Principles of Character Making. By ARTHUR HOLMES. Philadelphia: J. B. Lippincott Co. Pp. 336.

This book is a worthy contribution to the literature of a subject which seems to be full of promise for the early future. Its brief introduction by the editor of the series states the aim of a republic to have its citizens feel their civic, social, vocational, and moral obligations toward the body politic. Recognizing the paramount importance of character-making as an end of school work, the author presents the subject of child-training from the genetic point of view, and sets forth with scientific accuracy the commonly accepted principles of physiological psychology applicable to moral training and moral instruction. Of especial worth are his chapters devoted to "Instincts"; "The Making and Breaking of Habits"; "The Impulses and Ideals of Youth"; and the last chapter of some forty pages, "The Psychological Basis of Moral Education." Indeed the first eleven of the twelve chapters of the book seem to have been written to give the lay reader a background of general modern psychology, in the light of which the principles underlying moral education, as stated in this chapter, may be understood.

The volume is so full of little errors of a grammatical, rhetorical, or typographical nature as to suggest unwarranted haste in its preparation. E.g., "doctrine of transmission by acquired characteristics of heredity," p. 108; "Games have their incubation period, their development, and their *convalescence*," p. 151; "Men begin to name us 'good' or 'bad,' 'selfish' or 'unselfish,' 'noble' or 'ignoble,' a 'patriot' or a 'parasite,'" p. 170; "panstomagoria of sensations," p. 173; "*inexplicability*," p. 175; "in a preliminary *phenomena*," p. 213; "Terrible it would be if notions of vice can be tricked out . . . , " p. 226; "Whatever, therefore, that is to be taught," p. 322, etc.

The student of psychology will find nothing new in the book, but he will find much that ought to make more rational the treatment of children by the parent or teacher who seeks to develop their moral nature rather than to impose upon them moral codes good for adults but foreign to the life of the child in his particular stage of evolution.

E. O. ENGLEMAN

DECATUR, ILLINOIS

A Review of "A Laboratory Handbook for Dietetics." By MARY SWARTZ ROSE. New York: Macmillan. \$1.10.

This is a valuable contribution to home economic literature. It is written as a text for laboratory courses in dietetics, and it may very well be used as such, following the order suggested by Dr. Rose after a number of years of experience in teaching dietetics at Columbia University. But the usefulness of the book is by no means confined to those who wish to follow this particular outline. No class that has any work to do in the calculation of dietaries can afford to do without the tables it contains, and most classes will be very glad to welcome also the simple explanations given of calculations and its suggested score card for judging of dietaries.

The book ought, also, to be useful to those educated homemakers of the country who have a fundamental knowledge of physics, chemistry, and physiology, and who are willing to give some time to studying carefully the problem of feeding their families. The book would seem to be clearly enough written to be studied without the help of a teacher by anyone who is in earnest and who has had some scientific preparation.

The first part gives an explanation of food values and food requirements. A number of excellent tables are included to show how food requirements are modified by activity and age. To the average class in dietetics, this part will serve as a review and as a summary for ready reference of especially useful tables. The intelligent mother will be interested in the tables giving the food requirements of children, especially if she has already wondered over the rapacious appetite of growing children, and the statement sometimes made that boys from fourteen to seventeen need nine-tenths as much food as the adult man. So much depends on the work of the adult man!

Part II contains a valuable series of exercises in dietary calculations with the methods carefully explained and the mechanical work much lessened by the tables given.

Part III gives still more tables. The composition and food value of one gram, one ounce, one pound, and one standard unit, or one hundred calories portion, are given for four hundred and ninety varieties of foods. Also the very valuable tables on ash constituents given in Sherman's *Chemistry of Foods and Nutrition* are reprinted.

The appendix gives suggestions for equipping a dietetics laboratory.

EDNA D. DAY

UNIVERSITY OF KANSAS

An Introduction to the Study of Adolescent Education. By CYRIL BRUYN ANDREWS. New York: Rebman Co., 1912. Pp. x+185.

The body of material concerns adolescent boys in their relation (1) to adults, (2) to immorality and sexual pathology in schools, (3) to self-assertion and discipline.

Mr. Andrews knows the real conditions of boarding-school life and is undismayed by them. The usual methods of dealing with unfortunate conditions he condemns unsparingly. "For years the scientists have allowed these half-truths to be circulated among adolescents with scarcely a word of contradiction. . . . Men with names famous in various walks of life, but who have never made any really scientific study of the perversions of adolescence, have circulated broadcast among boys and girls statements of half-truths and veiled threats of lunacy the evil of which they can hardly have realized. Men in such widely different professions as General Baden-Powell, Canon Wilberforce, and Henrik Ibsen have alike lent their names to words of incontinence, which are fraught with possibilities of the greatest harm to the highly strung boy or girl for whose ears they are intended."

It is good to read a book showing full knowledge of difficulties yet which does not leave one with the bad taste in the mouth that usually follows the reading of chapters and books on sex education and life.

The section on self-assertion and discipline presents a sane treatment of current issues. "Every other question of school life should be sacrificed to give the adolescent a wide sphere for the satisfaction of his healthy desire for self-development; there is no matter, however important, that should have precedence of this consideration. By healthy self-expression and by healthy self-realization all that is best in the boy is alone developed, and by allowing him to act for himself all that is worst is frequently suppressed."

Especially sensible is the author's attitude toward athletics: "It is important to realize that the keen, healthy-minded, though unathletic, boy is not so rare a phenomenon as is supposed, and that if no interest is taken in the play and work we provide, the fault may very likely be our own. . . . The whole physiological side of education suffers from a mistaken belief that athleticism is a thing good in itself, and not merely a form of self-expression which a section of boys in every school may possibly adopt. . . . Athleticism must always remain one of the outlets for adolescent energy, but it should rest with each individual whether advantage is taken of the attractions it offers. . . . The belief in the heart of masters that unless a boy plays cricket or football with moderate proficiency he is to be distrusted forces many from pure expedience to play these games."

The concluding pages deal with democracy and religion.

The Religious Question in Public Education. By ATHELSTAN RILEY, MICHAEL E. SADLER, and CYRIL JACKSON. Longmans, Green & Co., 1911. Pp. vi+350. \$2.00.

"The old division between elementary and secondary education is becoming antiquated and will soon be obsolete. Before long the state may find itself compelled to extend some form of educational supervision over each individual during the years of adolescence. . . . Not less potent are other social forces which are rapidly obliterating many of the older class distinctions in English

education and bringing secondary education into close contact with elementary. But most explosive of all is the mass of religious conviction which feels that the present education acts fail to recognize parental claims in regard to the religious training of the young."

In 1909 Mr. Riley sought through the *Times* and other journals for recommendations concerning religious education. Out of nearly a hundred replies a dozen have been selected representing various points of view. These are reviewed with reference to "the question of curriculum, the question of public administration, and the question of political obligation; or, in other words, (1) to the place of the religious lesson in the course of teaching provided by the school, (2) to the degree of control which the national government and the local education authorities should respectively exercise over the work of schools in receipt of aid from public funds, and (3) to the rights of the parent as against the state, and to the rights of the state as against the parent, in determining what a child shall learn at school."

To the American teacher this analysis is especially valuable for the range of possibilities is well shown. A conscious responsibility for this problem may avoid some of the dangers which will come when recognition of it is forced upon us by lack of forethought and provision.

FRANK A. MANNY

BALTIMORE TEACHERS TRAINING SCHOOL

The Idea of the Industrial School. By GEORG KERSCHENSTEINER; translated from the German by RUDOLF PINTNER. New York: Macmillan, 1913. Pp. 110.

The author states that the purpose of the volume is to make clear the real significance of the more recent appearance of the industrial school, to correct some of the mistakes which have been made in trying to introduce manual work into the general system of education, and to save the public school "from committing errors, which would be far more dangerous than the sins of the old 'book school.' "

A philosophical discussion of the purpose and duties of the public school leads to the following conclusions: "These are the three obvious duties of our public schools, and they include at the same time the whole aim of education. Let us denote them shortly as:

- "1. The duty of vocational education, or the preparation for a vocation.
- "2. The duty of teaching the ethical value of a vocation.
- "3. The duty of teaching the ethical value of the community within which the vocation is carried out.

"Since we cannot make ethical the community without making ethical those who form the community, so these three duties of the school necessarily include the ethical training of the individual."

In maintaining that the first duty of the public school is to give vocational

education the author recognizes that he is not in entire accord with the majority of educators, but he maintains that he does not "thereby set up a utilitarian aim, but an aim that is in the first place and in the greatest degree an ethical one."

In the chapter on "The Methods of the Industrial School" the author shows, first, that there may be widely differing conceptions of the term "Industrial Education"; second, that the content given it by the author emphasizes "education" rather than "industrial"; third, that the industrial school must constitute a vital part in the system of general education.

He pleads for the right to raise the standard of industrial work by giving it a distinct place in the curriculum, not only in the industrial schools, but frequently in the upper elementary grades, and by placing it under the charge of specially trained instructors.

"Last of all we have been taught this ultimate and most important fact, that the basis of all training of character lies in the development of a sound judgment, or, what is the same thing, in the ability to think logically. This can only be attained by independent intellectual work. Independent intellectual work is more a characteristic of the industrial school than is independent manual work."

In general it would seem that "the idea of the industrial school is by means of a minimum of knowledge to build up a useful citizen endowed with a maximum of skill, ability, and joy in work."

FRANK M. LEAVITT

UNIVERSITY OF CHICAGO

Didaktik der Himmelskunde und der astronomischen Geographie. Von ALOIS HÖFLER. Leipzig und Berlin: Teubner, 1913. Pp. xii+414. M. 11.

This work is the second volume of a 10-volume set of pedagogical handbooks, edited by Höfler and Poske, and now appearing from the Teubner Press, for use in realist instruction in higher schools. The volumes already available deal with mathematics, astronomy, and botany.

In German and Austrian programs for the *Real*-schools astronomical instruction runs as a 2- or 3-hour subject through several semesters. It is commonly given from textbooks in about as perfunctory a fashion as mere textbook astronomy is given with us when no observational or experimental work is associated with it. This book seeks to reform prevailing instruction by making it truly scientific.

The author first recites and discusses critically the widespread complaints against the results of the traditional practice, develops and justifies a rational program for a first-hand study of the sky by the pupils, building upon this a considerable body of associated theory. His program runs through the whole 8 years of the Austrian *Real*-school, extending 2 or 3 hours a week from the

eleventh to the eighteenth years of life, both inclusive, and divides the work into four 2-year stages.

The first stage is astronomical geography and deals with direct observations of the sun and the changes in apparent position, movement, heat, and light due to changes in the observer's latitude. The second stage comprises such astronomical geography and study of the sky as associate strongly with the physics of the third and fourth gymnasial years (thirteenth and fourteenth years of life). This stage deals with the moon, brighter planets, and stars and traces the paths of sun and moon in the zodiac. It includes the transition from apparent to real motions of the sun and moon and concludes with the heliocentric theory of Copernicus. The third stage, concerning the fifth and sixth gymnasial years (fifteenth and sixteenth years of life), consists of astronomical work that is associated with the regular mathematical work. It embraces more than 100 typical problems of astronomy, classified into arithmetical, algebraic, geometrical, and trigonometrical. There are some also on map-making. The last stage, for the seventeenth and eighteenth years of life, comprises a considerable body of elementary theory based directly on the antecedent observational and experimental work.

Then follow four appendices, containing readings extracted from Whewell, and from Professor Foerster's writings; a copy of two Gymnasial Programs; a collection of gross errors quoted from prevailing texts, and concludes with an extensive list of references to magazine articles suitable for use as collateral reading in gymnasial instruction in astronomy.

The historical order is followed largely, and persistent emphasis is placed on the importance of basing everything on first-hand observational evidence. The pedagogy of all parts of the proposed program is ably expounded. As an aid to the teacher of astronomy to children from eleven to eighteen years of age this fine work stands without a peer in all literature. If it had appeared twenty years earlier astronomy, we dare say, would still have been a fixed constituent of high-school programs. In all essentials the book is excellent.

G. W. MYERS

UNIVERSITY OF CHICAGO

A First Year in Bookkeeping and Accounting. By MACFARLAND and ROSSHEIM. New York: D. Appleton and Co., 1913. Pp. 227. \$1.50.

In the preface the authors state concisely their plan. "Their aim has been to lay particular emphasis on the method of exposition, appeal being made to the understanding rather than to the memory of the student." "The text is designed to provide a full year's work in bookkeeping and accounting for use in higher institutions of commercial training." "Each chapter contains an exposition of the subject followed by illustrative problems and solutions to

enable the student better to understand the principles explained and to apply them in the problem."

The authors have held consistently to their plan and produced a text radically different from the common business college or high-school text. Exposition occupies the major place, exercises a minor one. The presentation is logical and scholarly. It seems probable that students with no knowledge of bookkeeping, even if mature, will find the text difficult.

The titles of the chapters are as follows: Introduction, Single Entry Bookkeeping, Profit and Loss in Single Entry Bookkeeping, Double Entry Bookkeeping, The Trial Balance, The Theory of Debit and Credit, The Change from Single Entry to Double Entry Bookkeeping, Promissory Notes, Interest and Discount, The Six-Column Statement, Closing a Set of Books, The Cash Book, The Sales Book, The Purchase Book, The Bill Book, Drafts, Bills of Lading, Partnerships, A Bank Account, Shipments and Consignments, Depreciation Reserves and Accruals, The Balance Sheet and Profit and Loss Statement, Capital and Revenue, Columnar Books, Revenue Accounts.

Pages 187 to 225 contain 3 problems of sets to be worked by the student.

GEORGE A. BEERS

LAKE HIGH SCHOOL
CHICAGO

Syllabus of Mathematics. Compiled by the Committee on the Teaching of Mathematics to Students of Engineering. Ithaca, N.Y.: Cornell University, 1912. Pp. 138. \$0.75.

This syllabus was prepared by a committee appointed at a meeting of mathematicians and engineers held in 1907, under the auspices of the Chicago Section of the American Mathematical Society and Sections A and D of the American Association for the Advancement of Science. The committee was instructed to report to the Society for the Promotion of Engineering Education, and the report or syllabus is published by this society.

The volume is "a synopsis of those fundamental principles and methods of mathematics which, in the opinion of the committee, should constitute the minimum mathematical equipment of the student of engineering." The five parts of the volume consist of syllabi on the following subjects: (1) "Elementary Algebra," (2) "Elementary Geometry and Mensuration," (3) "Plane Trigonometry," (4) "Analytic Geometry," (5) "Differential and Integral Calculus." The volume should be of value to both teachers and students. It should show teachers of mathematics what are considered the fundamentals in mathematics for engineering students, and should indicate to teachers of engineering what mathematical preparation they may reasonably expect their students to have had.

J. F. MILLIS

FRANCIS W. PARKER SCHOOL
CHICAGO

German for Beginners. By E. PROKOSCH.

In his new book, *German for Beginners*, the author has in general followed the plan of his *Introduction to German*. In Part I he presents the Reading Texts on which are based the Exercises and Lessons of Part II. Part III offers a Synopsis of Grammar which should prove a welcome feature. The changes and additions made, in particular the simplification of the texts, show an improvement over the first book and make it more adaptable to beginning classes.

O. C. BURKHARD

LITERATURE

British Poems: From "Canterbury Tales" to "Recessional." By PERCY ADAMS HUTCHINSON. New York: Scribner. Pp. vii+536.

An admirable text for college classes. Contains a wise selection of best non-dramatic poetry. Poems are printed entire.

The Facts about Shakespeare. By WILLIAM ALLAN NEILSON and ASHLEY HORACE THORNDIKE. New York: Macmillan. Pp. v+273.

A useful book for parallel readings when high-school classes are studying Shakespeare. Facts are included concerning Shakespeare's life, his London, his reading, his chronology and development as a dramatist, the Elizabethan theater, etc.

The School Drama. By JAMES L. MC CONAUGHEY. New York City: Teachers College, Columbia University. Pp. 116. \$1.00.

A scholarly study of the school drama, dealing largely with historical aspects of development in England and Germany.

Shakspere Glossary, Grammar, etc. By ROBERT H. FLETCHER. Cedar Rapids, Iowa: The Torch Press. Pp. 90. \$0.30.

Presents in convenient form elementary information for understanding of Shakespeare's plays.

New English Literature. By REUBEN POST HALLECK. New York: American Book Co. Pp. v+647.

A revised form of the author's well-known book *History of English Literature*. The lists of "Suggested Readings" which follow each chapter indicate the belief that a study of the history of literature is appropriate only when accompanied by the study of the masterpieces themselves. The *New English Literature* treats fully the later Victorian writers, has a careful consideration of modern drama, and contains suggestions and references for a literary trip through England.

American Literature (new edition). By ALPHONSO GERALD NEWCOMER.
Chicago, New York: Scott, Foresman & Co. Pp. 5+364. \$1.00.

An admirable revised edition of the author's well-known book. The text is based upon compromise method of teaching, taking a mid-ground between the use of a historical textbook and the study of a few miscellaneous master-pieces. The study of literature is to be accompanied by reading the works of important authors.

Rhetoric and the Study of Literature. By ALFRED M. HITCHCOCK. New York: Henry Holt & Co. Pp. iii+408. \$1.00.

An exceedingly useful text for the third and fourth years of the high school. It includes a vigorous review of rhetoric, a study of various literary forms, and a summary history of English literature. The pages are well filled with excellent illustrative matter and suggestive exercises.

BOOKS RECEIVED

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- Brewster, William T. English Composition and Style. New York: The Century Co., 1912. Pp. 512.
- Damon, Lindsay Todd. "The Spy," James Fenimore Cooper. Chicago: Scott, Foresman & Co., 1914. Pp. viii+458. \$0.40.
- Elson, William H. Primary School Reader. Book III. Chicago: Scott, Foresman & Co., 1913. Pp. 287. \$0.45.
- Esenwein, J. Berg, and Roberts, Mary Eleanor. The Art of Versification. Springfield: The Home Correspondence School, 1913. Pp. xii+311.
- Hardy, Mary Earle. Nature's Wonder Lore. Chicago: Rand McNally & Co., 1913. Pp. 141. \$0.50.
- O'Grady, Alice. The Teachers' Story Teller's Book. Chicago: Rand McNally & Co., 1913. Pp. 352. \$1.00.
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CURRENT EDUCATIONAL LITERATURE IN THE PERIODICALS¹

IRENE WARREN

Librarian, School of Education, University of Chicago

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- (The) apprentice problem. *Print. Art* 22:361-2. (Ja. '14.)
- Athletics and morals. An introduction. *Atlan.* 113:145-60. (Fe. '14.)
Stearns, Alfred E. Athletics and the school.
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_____. The boy who goes wrong. *Cent.* 87:542-46. (Fe. '14.)
- Cattell, J. McKeen. Science, education and democracy. *Science* 39:154-64. (30 Ja. '14.)
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- Childs, W. L. How can physical training be made of greatest value to the high-school boy? *School R.* 22:103-5. (Fe. '14.)
- Comstock, Sarah. Byways of library work. *Outl.* 106:201-5. (24 Ja. '14.)
_____. The story corner. *St. Nich.* 41:308-13. (Fe. '14.)
- Curtis, Henry S. Educational extension through the rural social centre. *Educa.* 34:283-94. (Ja. '14.)
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¹ Abbreviations.—*Atlan.*, Atlantic Monthly; *Cent.*, Century; *Cur. Opinion*, Current Opinion; *Educa.*, Education; *Educa. R.*, Educational Review; *J. of Educa.* (Bost.), Journal of Education (Boston); *J. of Educa. Psychol.*, Journal of Educational Psychology; *J. of Home Econ.*, Journal of Home Economics; *Lit. D.*, Literary Digest; *Liv. Age*, Living Age; *Outl.*, Outlook; *Pop. Sci. Mo.*, Popular Science Monthly; *Print. Art*, Printing Art; *Psychol. Clinic*, Psychological Clinic; *School R.*, School Review; *Sci. Am.*, Scientific American; *St. Nich.*, St. Nicholas; *Teach. Coll. Rec.*, Teachers College Record; *Train. School M.* (N.J.), Training School Magazine (New Jersey).

- Heck, W. H. Parents' part in school hygiene. *Educa.* R. 47:127-33. (Fe. '14.)
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- Kohnky, Emma. Preliminary study of the effect of dental treatment upon the physical and mental efficiency of school children. *J. of Educa. Psychol.* 4:571-78. (D. '13.)
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- Winch, W. H. Experimental researches on learning to spell. II. *J. of Educa. Psychol.* 4:579-92. (D. '13.)
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